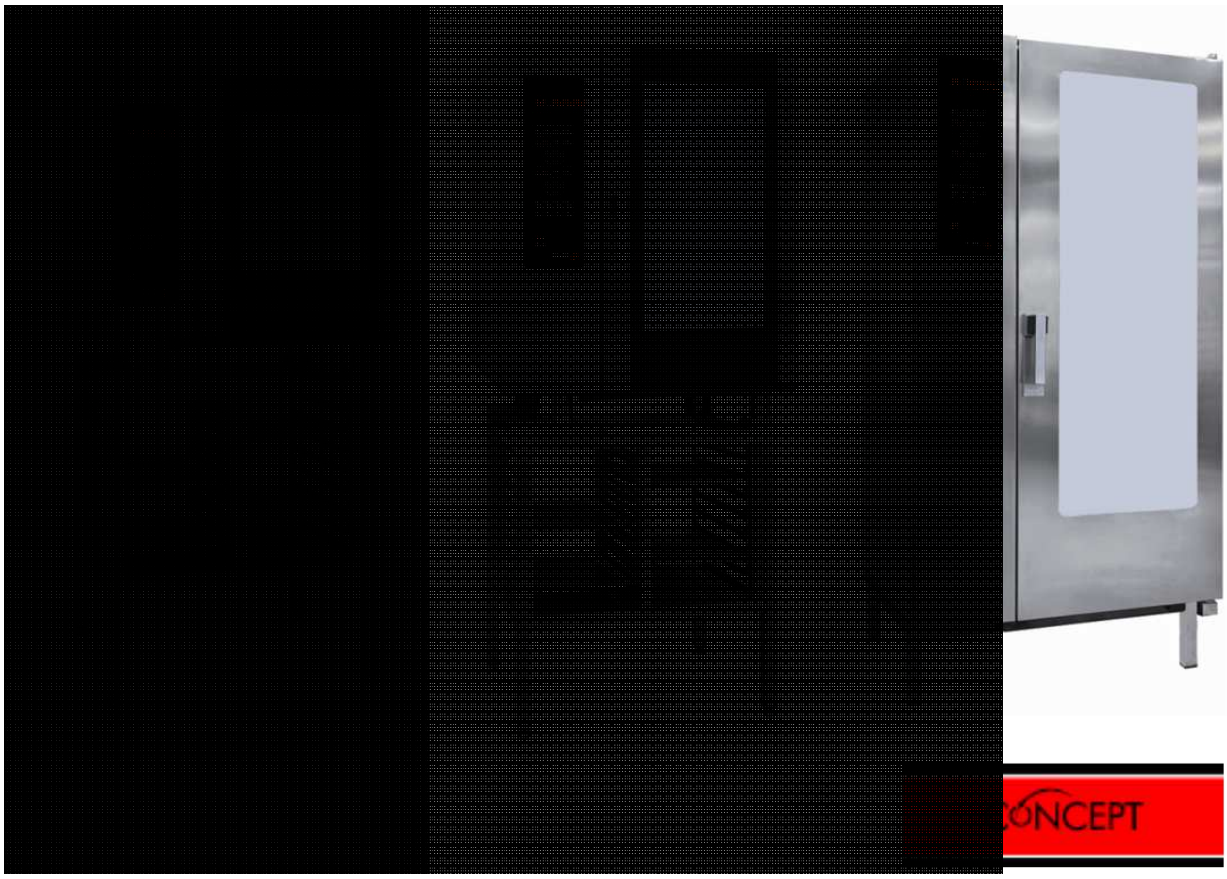
FAGOR

FAGOR INDUSTRIAL

TECHNICAL MANUAL OVENS
“ADVANCE CONCEPT”
“ADVANCE”
“ADVANCE PLUS”



16/11/2012

GENERAL SAFETY INSTRUCTIONS

GENERAL INFORMATION

Before switching on the newly installed appliance for the first time, the inside should be cleaned with a cloth soaked in soapy water. Then switch on the empty oven in Steam mode for ½ hour to eliminate the odours associated with a new appliance.

Before starting the appliance, check that the cut-off tap for the water supply is open, the cut-off tap for the gas is open (only in gas models) and that the electricity supply is on.

When the oven is to remain unused for long periods of time, we recommend you close the cut-off tap to the water supply, the cut-off tap to the gas supply (only gas models), and disconnect the electricity supply.

The oven should always be installed below a extractor hood.

Fagor Industrial recommends you read the safety instructions and the installation and user manual carefully.

Fagor Industrial recommends that the manuals and documents provided with the oven are kept to hand at all times.

The oven should only be used for cooking food in the catering sector. The use of the oven for any purpose other than the above is considered to be inappropriate and therefore dangerous.

The oven should only be operated with your hands. Any damage due to the use of sharp objects will not be covered under guarantee.

The oven should be used by trained and qualified personnel.

Other heat sources such as fryers or fry-tops should not be installed close to the oven.

WARNING

The installation, incorrect adjustment, inappropriate maintenance or use of the appliance may cause material damages and injuries. Before commissioning the appliance, carefully read the instructions.

SAFETY

Do not store or use gases or explosive liquids near the appliance, or introduce liquids containing alcohol inside the oven.

When the oven is hot, do **not** open the door suddenly (danger of burns due to hot steam). Do **not** put cold water in the chamber when it is hot.

Repairs or adjustments carried out by personnel not belonging to FAGOR INDUSTRIAL SAT (Technical Assistance Service) or an authorised SAT will imply the cancellation of the oven warranty.

GIZATASUNA LANEAN MONDRAGON

FAGOR INDUSTRIAL

READING ADVANCE OVEN NOMENCLATURE

"ADVANCE CONCEPT"

A	C	E/G	061
(1)	(2)	(3)	(4)

1: ADVANCE SERIES
2: CONCEPT MODEL
3: ELECTRIC/GAS
4: CAPACITY

061: 6 Trays GN 1/1
101: 10 Trays GN 1/1
102: 10 Trays GN 2/1
201: 20 Trays GN 1/1
202: 20 Trays GN 2/1

ADVANCE

A	E/G	061
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"ADVANCE PLUS"

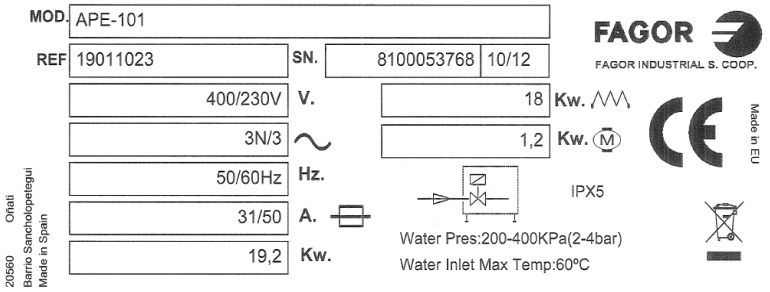
A	P	E/G	061
(1)	(2)	(3)	(4)

1: ADVANCE SERIES
2: PLUS MODEL
3: ELECTRIC/GAS
4: CAPACITY

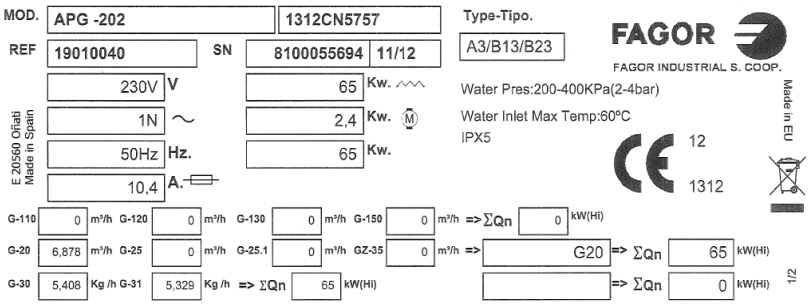
061: 6 Trays GN 1/1
101: 10 Trays GN 1/1
102: 10 Trays GN 2/1
201: 20 Trays GN 1/1
202: 20 Trays GN 2/1

Specification plate

Electrical:



Gas:

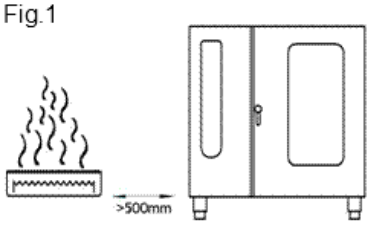


INSTALLATION

INSTALLATION MANUAL

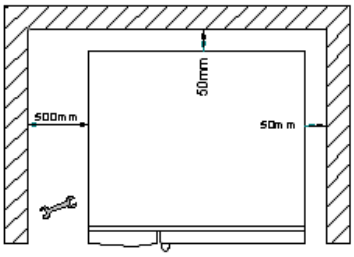
MINIMUM DISTANCE

Fig.1



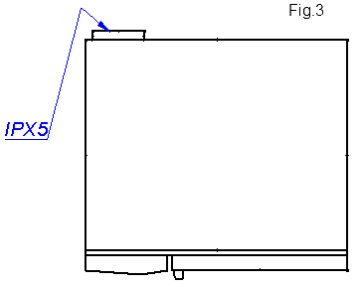
Minimum distance from other sources of heat on the left side 400mm. Fig. 1.
Warning: An excessive room temperature on the left-hand side of the appliance may trigger the appliance safety disconnection.

Fig.2



We recommend a distance of 500 mm on the left-hand side of the appliance to leave room for repair and maintenance work. Fig. 2.

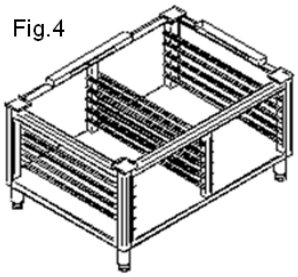
Fig.3



The IPX5 plate must be fastened on the rear of the ovens. Fig. 3
Check the ovens are stable

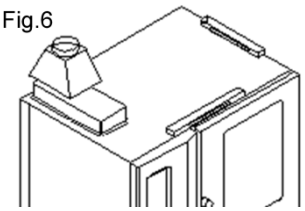
INSTALLATION OF TABLE TOP MODELS

Fig.4



Level the frame horizontally before placing the oven on the frame. Fig. 4

Fig.6



The appliance must be horizontally level. Fig. 6.

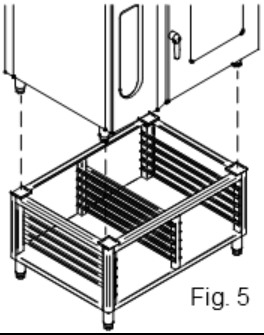


Fig. 5

Rest the oven on the frame and line up the supports with the holes on the frame. Fig 5

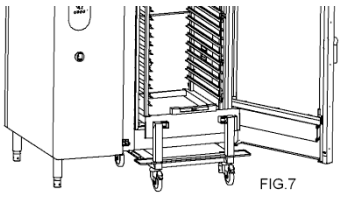


FIG.7

(Optional in model 202) The mobile load trolley (optional) must be horizontal on the appliance. Fig. 7

ELECTRICAL CONNECTION

The electrical connection of the appliance must always be carried out by an **OFFICIAL TECHNICAL SERVICE** or an **AUTHORISED TECHNICAL SERVICE**.

The legal standards in force in each country on connections to the mains should be taken into account.

Check that the mains voltage corresponds to that indicated on the nameplate.

Use **POLYCLOROPRENO** cable sleeves or other similar materials (**Ho5RN-F**).

A switch device should be installed next to the appliance for all the phases, with a gap of a minimum of 3 mm between contacts. This switch will be equipped with fuses.

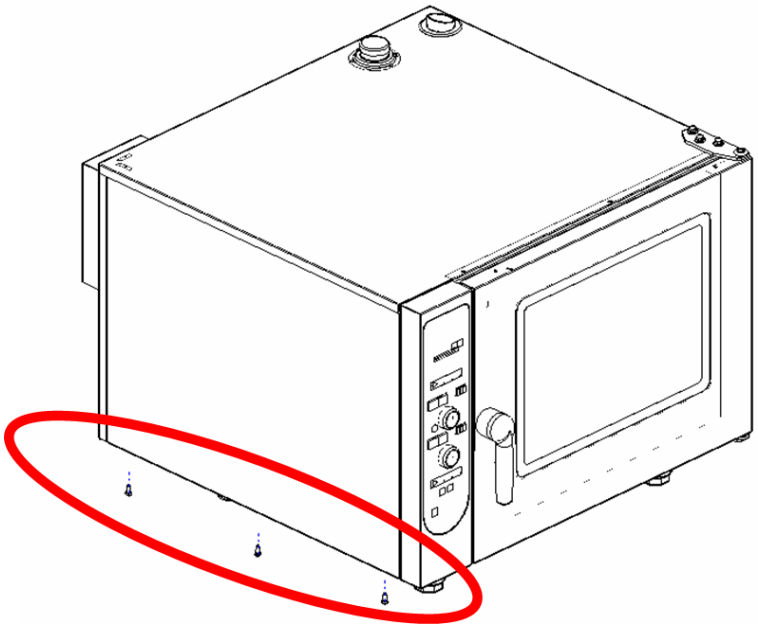
The appliance must be earthed, from the connection strip of the appliance to the earth connection of the main power supply.

The manufacturer will not be held liable for damage originated by failure to observe these requirements.

To access the connection strip, release the left side panel, pass the cable hose through the stuffing box on the exterior base and conenct as shown on the strip.

The electrical cord must correspond to standard EN 60335-1:2002 “ordinary polychloroprene sheathed flexible cable”.

The cord designation must be H05RN-F in accordance with CENELEC and 60245 IEC 57 in accordance with CEI.



IMPORTANT:

Before installing the left side panel, attach the electrical supply hose securely to the stuffing box.

When several appliances are installed in series, they should be earthed to each other using the point assigned for this purpose (equipotent outlet), located at the base of the oven, at the back.

SUPPLY VOLTAGE	CABLE SECTION	POWER SWITCH FUSE	DIFFERENTIAL DEVICE
230V 50-60Hz	1x1.5 mm²+N+T 2 x 1.5 mm² + T	10A	300mA
ELECTRICAL OUTPUT			1.2
POWER GAS	Kcal/h (Hi)	G30/G31/G20	10,325
	BTU/h (Hi)	G30/G31/G20	40,975
	Kw (Hi)	G30/G31/G20	12

ACG-061 / AG-061 / APG-061

SUPPLY VOLTAGE	CABLE SECTION	POWER SWITCH FUSE	DIFFERENTIAL DEVICE
230V 50-60Hz	1x1.5 mm²+N+T 2 x 1.5 mm² + T	10A	300mA
ELECTRICAL OUTPUT			1.2
POWER GAS	Kcal/h (Hi)	G30/G31/G20	15,488
	BTU/h (Hi)	G30/G31/G20	61,460
	Kw (Hi)	G30/G31/G20	18

ACG-101 / AG-101 / APG-101

SUPPLY VOLTAGE	CABLE SECTION	POWER SWITCH FUSE	DIFFERENTIAL DEVICE
230V 50-60Hz	1x1.5 mm²+N+T 2 x 1.5 mm² + T	16A	300mA
ELECTRICAL OUTPUT			2.4
POWER GAS	Kcal/h (Hi)	G30/G31/G20	30,975
	BTU/h (Hi)	G30/G31/G20	122,920
	Kw (Hi)	G30/G31/G20	36

ACG-201 / AG-201 / APG-201

SUPPLY VOLTAGE	CABLE SECTION	POWER SWITCH FUSE	DIFFERENTIAL DEVICE
230V 50-60Hz	1x1.5 mm²+N+T 2 x 1.5 mm² + T	10A	300mA
ELECTRICAL OUTPUT			1.2
POWER GAS	Kcal/h (Hi)	G30/G31/G20	30,115
	BTU/h (Hi)	G30/G31/G20	119,505
	Kw (Hi)	G30/G31/G20	35

ACG-102 / AG-102 / APG-102

SUPPLY VOLTAGE	CABLE SECTION	POWER SWITCH FUSE	DIFFERENTIAL DEVICE
230V 50-60Hz	1x1.5 mm²+N+T 2 x 1.5 mm² + T	16A	300mA
ELECTRICAL OUTPUT			2,4
POWER GAS	Kcal/h (Hi)	G30/G31/G20	55,928
	BTU/h (Hi)	G30/G31/G20	221,938
	Kw (Hi)	G30/G31/G20	65

ACG-202 / AG-202 / APG-202

SUPPLY VOLTAGE	CABLE SECTION	FUSE RING FUSE	DIFFERENTIAL DEVICE
400V 3N 50-60Hz	3x2.5 mm2 + N+T	20A	300mA
230 V 3N 50-60Hz	3x4 mm²+N+T	32A	300mA
TOTAL POWER kW			10.2

ACE-061 / AE-061 / APE-061

SUPPLY VOLTAGE	CABLE SECTION	FUSE RING FUSE	DIFFERENTIAL DEVICE
400V 3N 50-60Hz	3x6 mm2 + N+T	32A	300mA
230 V 3N 50-60Hz	3x10 mm²+N+T	63A	300mA
TOTAL POWER kW			19.2

ACE-101 / AE-101 / APE-101

SUPPLY VOLTAGE	CABLE SECTION	FUSE RING FUSE	DIFFERENTIAL DEVICE
400V 3N 50-60Hz	3x16 mm2 +N+T	80A	300mA
230 V 3N 50-60Hz	3x35 mm²+ T	125A	300mA
TOTAL POWER kW			38.4

ACE-201 / AE-201 / APE-201

SUPPLY VOLTAGE	CABLE SECTION	FUSE RING FUSE	DIFFERENTIAL DEVICE
400V 3N 50-60Hz	3x10 mm2 + N+T	63A	300mA
230 V 3N 50-60Hz	3x25 mm²+ T	100A	300mA
TOTAL POWER kW			31.2

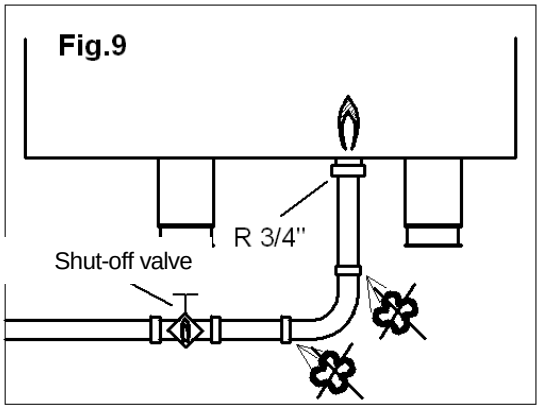
ACE-102 / AE-102 / APE-102

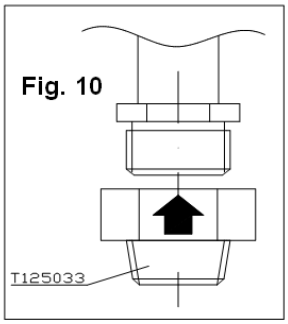
SUPPLY VOLTAGE	CABLE SECTION	FUSE RING FUSE	DIFFERENTIAL DEVICE
400V 3N 50-60Hz	3x25 mm2 + N+T	125A	300mA
230 V 3N 50-60Hz	3x70 mm²+ T	180A	300mA
TOTAL POWER kW			62.4

ACE-202 / AE-202 / APE-202

CONNECTION TO GAS

Gas connection





Warning:

- The gas installation may only be connected by an authorised local gas technician.
- It is essential to ensure that the gas supply pipes and the connection pipes for the corresponding measurement systems are the correct diameter.
- Check that the gas supply is correctly sealed.

Maximum consumption with nominal thermal load

Type of gas	Pressure required fluidity (mbar)	ACG-061 AG-061 APG-061	ACG-101 AG-101 APG-101	ACG-201 AG-201 APG-201	ACG-102 AG-102 APG-102	ACG-202 AG-202 APG-202
Natural gas H G-20 (m^3/h)	20	1.270	1.905	3.809	3.704	6.878
Butane gas G-30 (kg/h)	30	0.998	1.498	2.995	2.912	5.408
Propane gas G-31 (kg/h)	37	0.984	1.476	2.951	2.869	5.329

The quantity of air required for the combustion is 2m^3/h per kW power.

Remarks:

- Observe the regulations issued by the local gas company.
- Observe the regulations for the installation.
- Check that the gas indicated in the section is identical to that supplied.
- A pipe of at least Ø 12 x 10 mm should be used for the gas connection to the appliance, together with a ¾" nut to connect to the oven.
- Gas shut-off valve in front of each appliance.

Warning:

If the pipe pressure is different to the fluid pressure, please contact the gas company. For natural gas, the appliance must not be started at pressures above 30 mbar. Close the gas inlet to the appliance.
Warning Service pressures exceeding 60 mbar are not allowed as some of the oven's components could become unusable.

Ventilation

The appliances must be installed in such a way as to allow adequate ventilation to prevent the unauthorised concentration in the premises of products emitted during combustion which may be harmful to health.
The installation of an extraction hood is recommended for the extraction of smoke and steam in compliance with the **UNE–100165:92** standard. It is advisable that the hood sticks out 200-400 mm from the front part of the appliance.
We recommend the annual maintenance by an authorised technician of the components relating to the gas installation.

CATEGORIES, GASES AND OPERATING PRESSURES

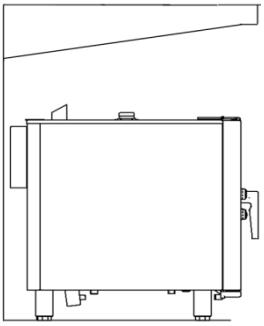
COUNTRY	CATEGORY	PRESSURE
AT	$II_{2H3B/P}$	20*50
AL - BG - DK - EE - FI - HR - LT - LV - MK - NO - RO - SE	$II_{2H3B/P}$	20*30
BE - FR	I_{2H}, I_{3+}	20, 30
CH - CY - CZ - ES - GB - GR - IE - IT - PT - SI - SK - TR	II_{2H3+}	20*28-30/37
DE - LU	$II_{2E3B/P}$	20*50
PL	$II_{2E3B/P}$	20*30
HU - IS - MT - NL	$I_{3B/P}$	30

EXHAUST GAS CONNECTION

Warning: An incorrect connection could result in fire.

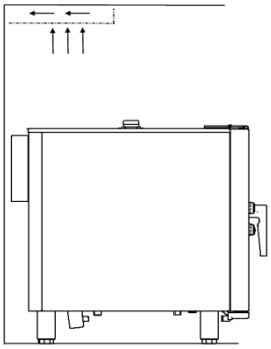
Gas appliances may be installed in different manners depending on the requirements of the installation.

Gas oven under extractor hood



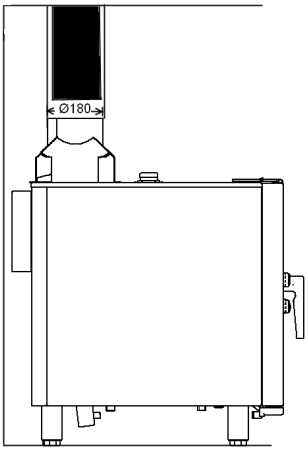
We recommend you install the gas oven below the smoke extractor hood.
Install in accordance with local regulations.
The gas supply to the oven should only be switched on once the extraction system has been activated.

Gas oven below ventilation ceiling



In this installation, extraction is through a natural draught connection, beneath an extractor hood or ventilation ceiling.
Install in accordance with local regulations.
The gas supply to the oven should only be switched on once the extraction system has been activated.
If the extraction/ventilation system does not operate correctly, the gas supply to the oven will be disabled.

Gas oven connected directly to the fluepipe



Convection/combined ovens with a non-return draught diverter system, a special accessory, may be connected directly to the fluepipe. The draught diverter accessory can be ordered using the following references:

Oven model 061/101:**19012272**
Oven model 102: **19012273**
Oven model 201:**19012290**
Oven model 202: **19012291**

The gas supply to the oven should only be switched on once the extraction system has been activated.
The exhaust gases reach very high temperatures.

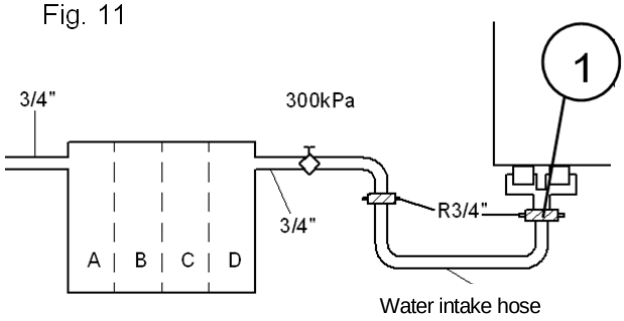
Warning: The exhaust pipes must provide a hermetic seal. The materials used should provide thermal stability up to temperatures of 400 ºC.

Instructions for the user:

- The exhaust gases may reach high temperatures, therefore exhaust gases and hot plate components may cause burns.
- Do not place combustible material on top of the appliance. Risk of fire!
- The exhaust gases may reach high temperatures, therefore exhaust gases and hot plate components may cause burns.
- Do not place combustible material on top of the appliance. Risk of fire!

WATER CONNECTION

Fig. 11



Only connect drinking water to the appliance.

Connect the appliance to the mains water supply at point 1, using the hose supplied como dotación. Ref Sap 12025198

The pressure of the incoming water should be between 200 and 400 kPa (2-4 kg/mm^2). We recommend 250 kPa.

The water used should have the following properties or characteristics:

PH 6.5÷7.5
Chlorides < 150mg/litre
Chlorine concentration 0.2÷0.5 mg/litre
Conductivity 400÷2000 µS
Water impurities Ø < 0.08 mm
Water hardness 5-10ºF

Recommended filters:

A) Fine filter.

If the water contains impurities such as sand, iron particles or floating substances, we recommend the use of a fine filter at the water input.

B) Activated carbon filter.

If the water has a high chlorine content over 0.2 mg/l (ppm) (this information can be obtained from the relevant water board), an activated carbon filter should be installed.

C) Installation of osmosis recirculation.

When the chloride concentration is above 150 mg/l (ppm) (this information can be obtained from the relevant water board), an osmosis recirculation installation should be mounted. In this case, please remember that the minimum conductivity value is 400 µS.

D) Water descaling:

For water with a high level of limescale (without chloride load) the water should be treated. Systems: H+. Interchange of ions or Kleensteam. We strongly advise against the use of sodium exchangers (normally used in dish washers) due to the formation of sodium sediment and the delay in boiling with common salt.

For the selection of filter systems (A, B, C, D).

Warning

Before connection, look at the label that shows which is the water inlet.

WASTE WATER CONNECTION

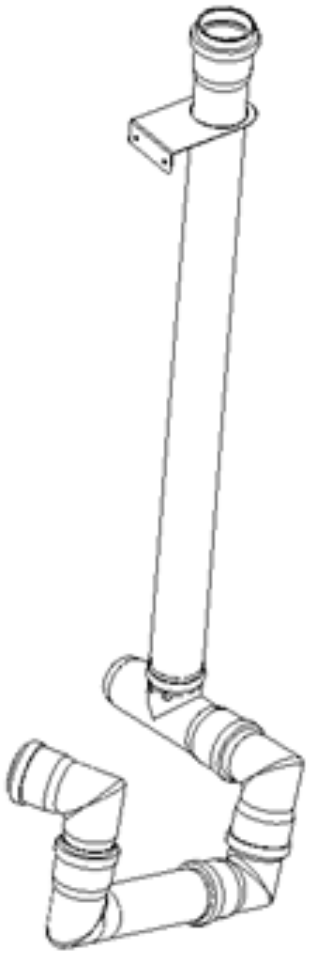


Fig. 12

Steam resistant pipe, no hoses used.

The drainage system may be installed using a standard siphon pipe connected to an open tank or grille.

For optimum performance, we recommend you use the manufacturer's drainage KIT, reference 19012125. Fig. 12.

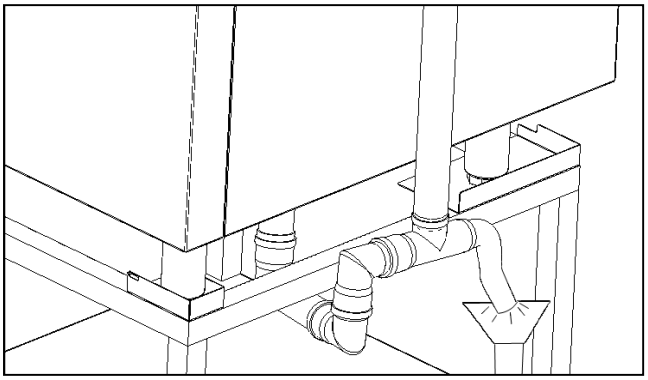
Ensure the measurements for the drainage are correct:

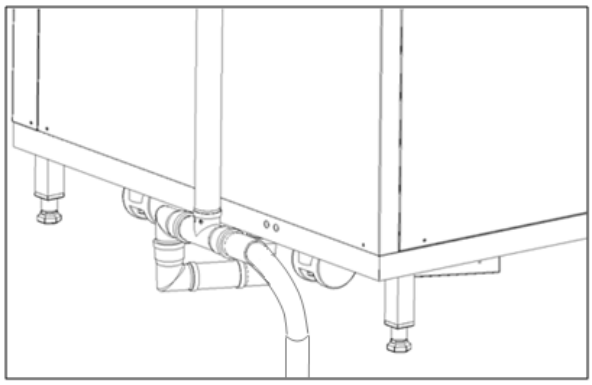
- Steam generator pumping volume in a reduced space of time: 0.7 l/second.

- Average temperature of waste water: 65 ºC

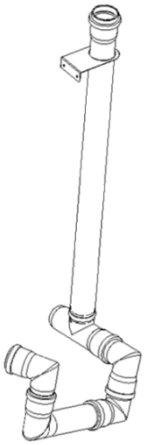
ADVANCE DRAINAGE KIT

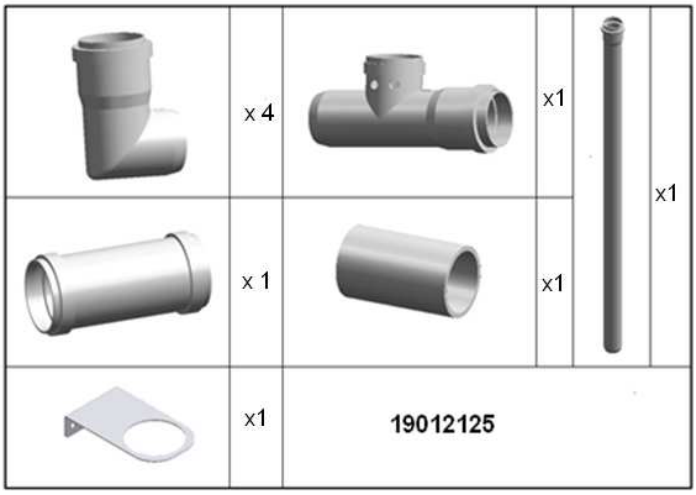
The drainage system may be installed using a standard siphon pipe connected to an open tank or grille. For optimum operation, we recommend you use the manufacturer's drainage KIT, reference 19012125.

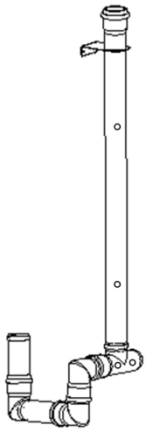




El kit contains the following units, which can be assembled in various ways, depending on where the oven is installed.

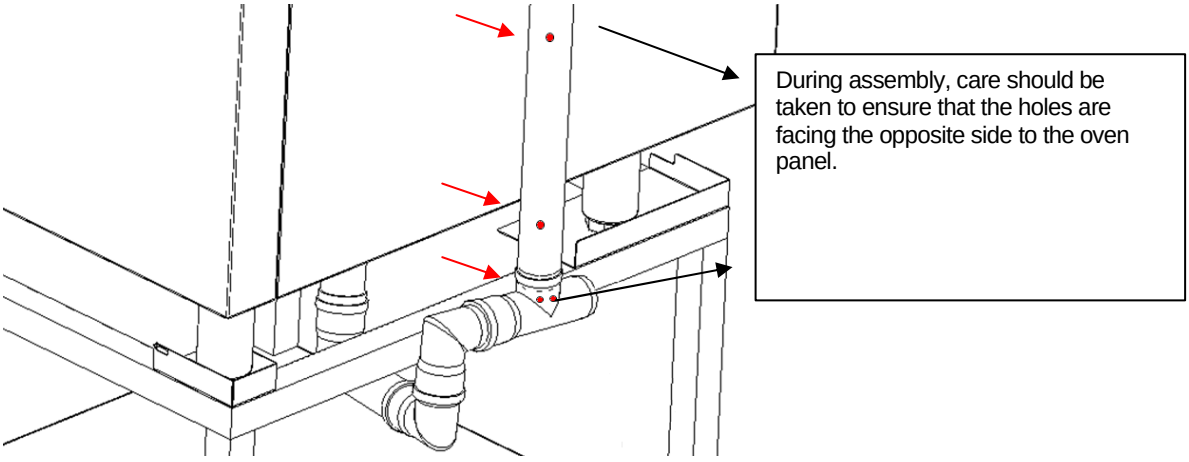






Configuración hornos Advance Plus
Advance Plus configuration

Configuración hornos Advance/ Concept
Advance/ Concept configuration



During assembly, care should be taken to ensure that the holes are facing the opposite side to the oven panel.

WASTE WATER CONNECTION

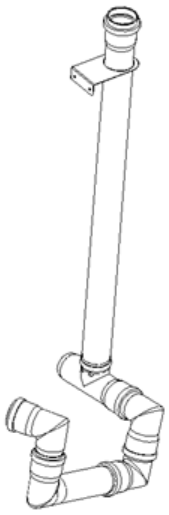


Fig. 12

Incorrect installation of the oven may result in the incorrect operation of the appliance.
Therefore, the drainage Kit supplied by the manufacturer should be installed (Fig. 12). This drainage system should be connected to an open tank or grille.

Installation (Fig. 13 Fig. 14.) should be in such a way as to ensure that the installed drainage outlet is below the oven outlet with a suitable slope to ensure drainage (>5% or 3º).

Make sure that the holes on the rising pipe face the side opposite the rear panel to prevent condensation.

Ensure the measurements for the drainage are correct:

- Steam generator pumping volume in a reduced space of time: 0.7 l/second.

- Average temperature of waste water: 65 ºC

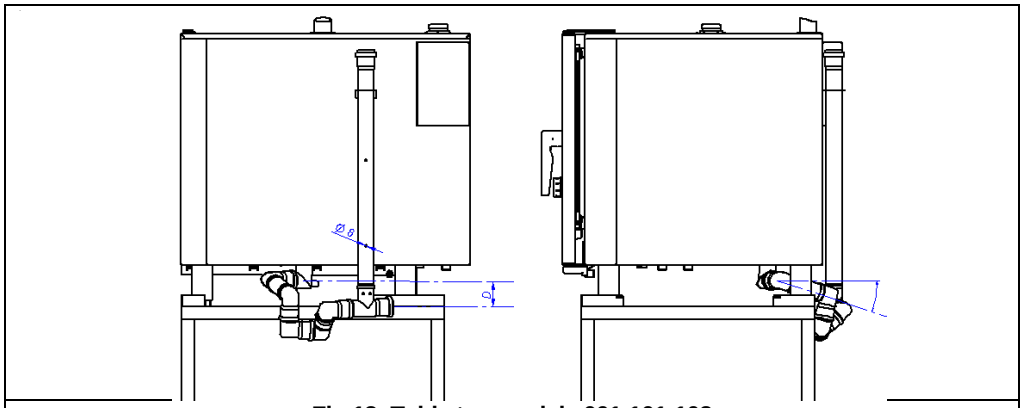


Fig.13: Table top models 061-101-102

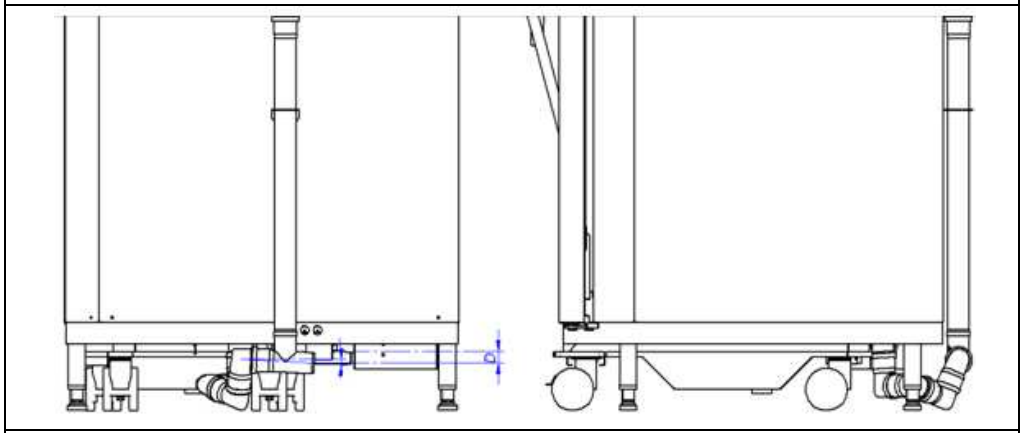
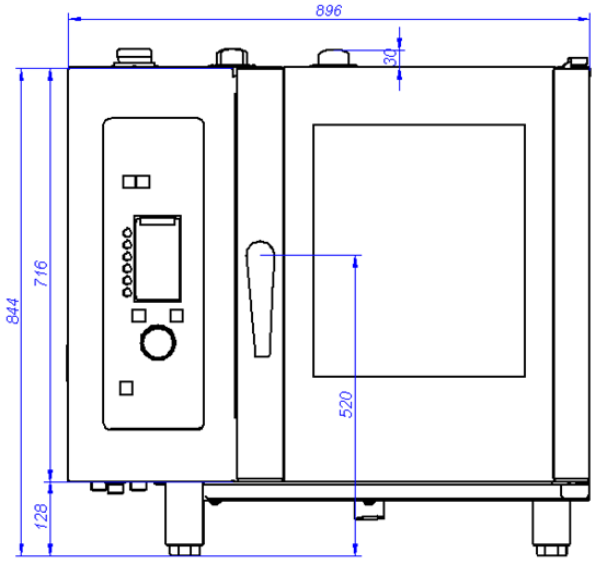
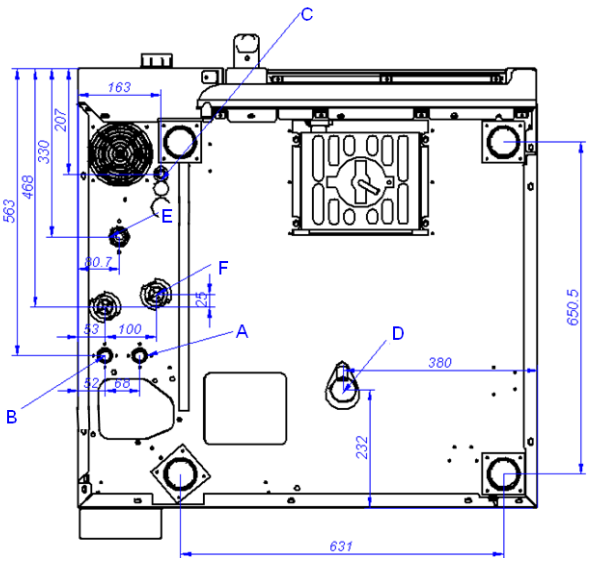


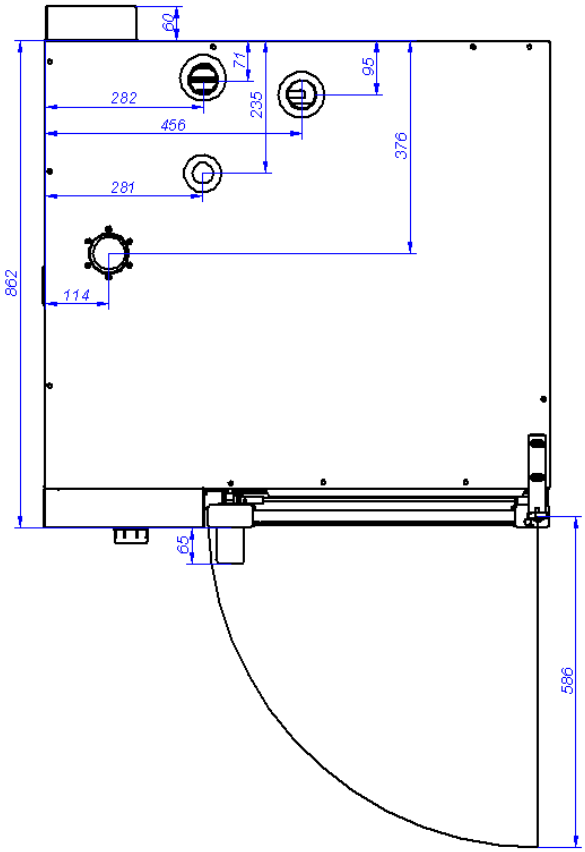
Fig. 14: Models 201 and 202

GENERAL MEASUREMENTS AND CONNECTIONS

ACG 061 - AG 061 - APG 061

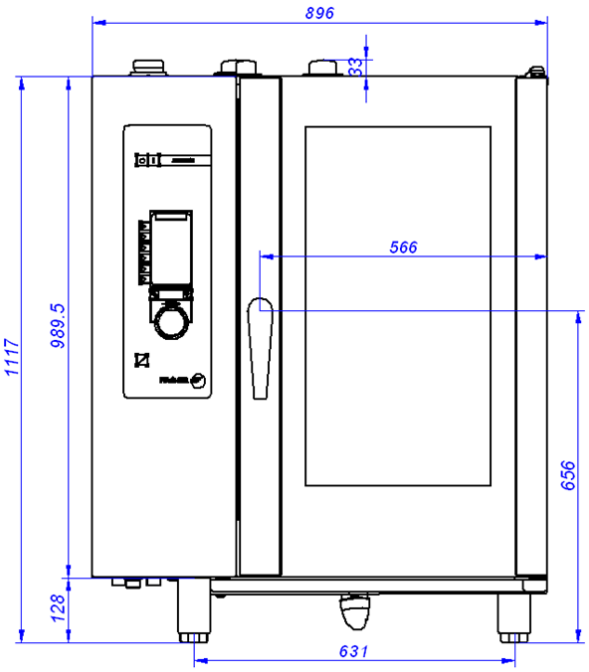


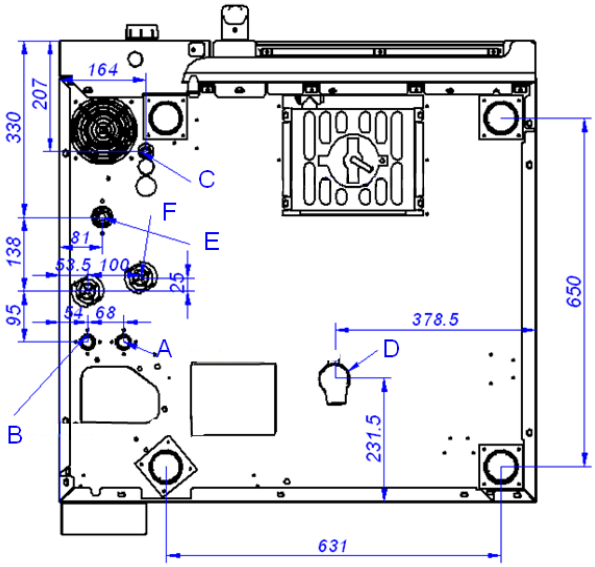


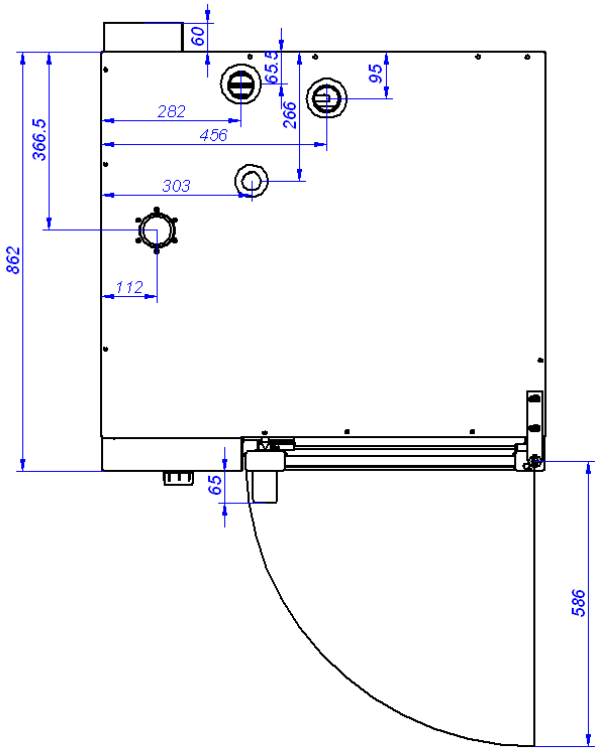


A: Soft water intake
C: Mains supply
D: Drainage
E: Gas inlet
F: Air inlet

ACG 101 - AG 101 - APG 101

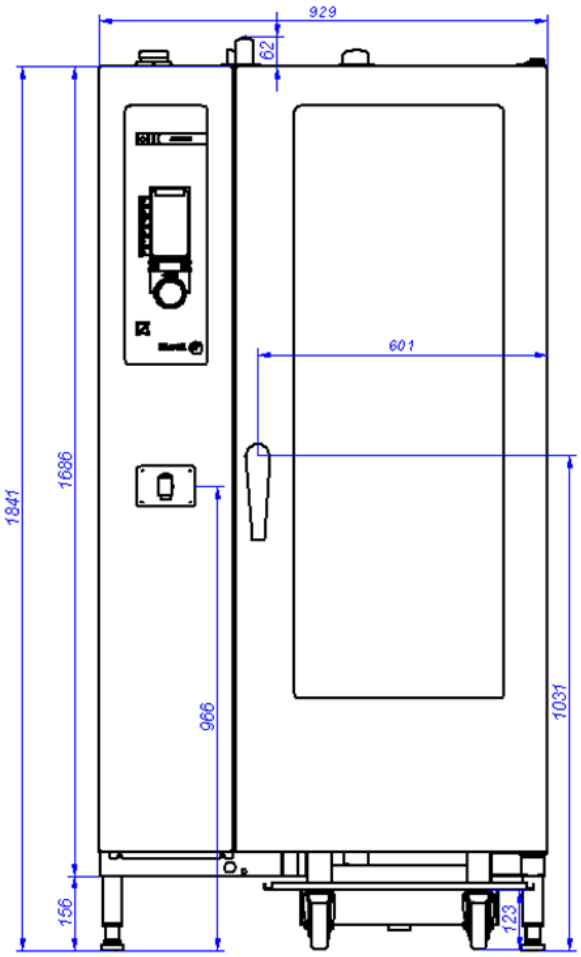


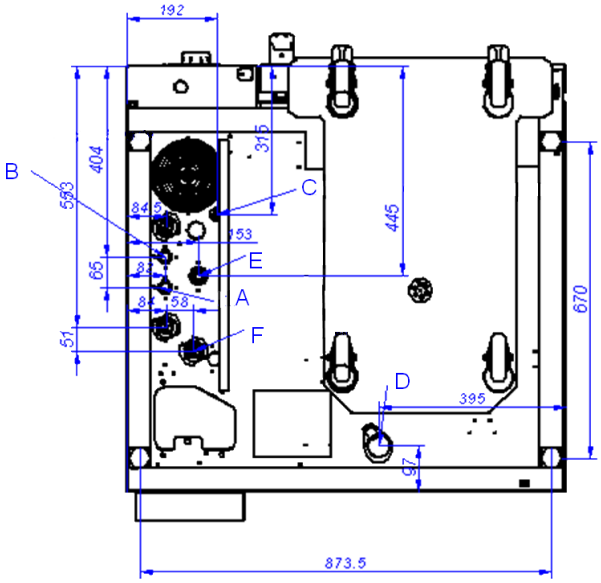


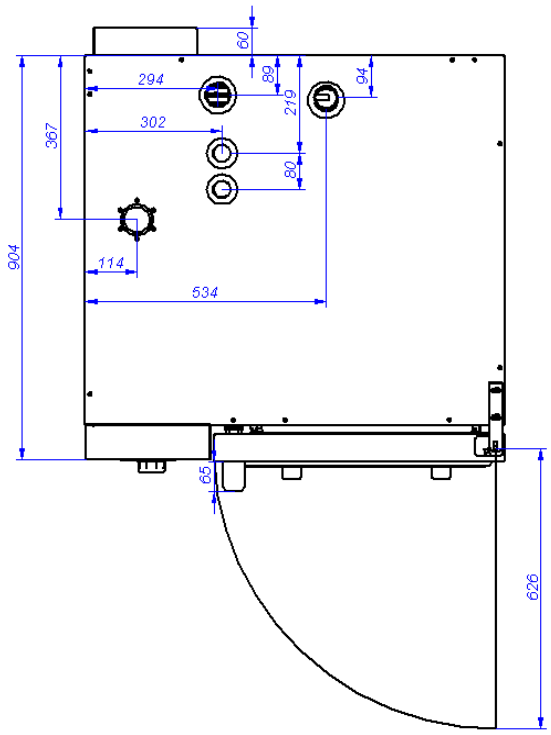


A: Soft water intake
C: Mains supply
D: Drainage
E: Gas inlet
F: Air inlet

ACG 201 - AG 201 - APG 201

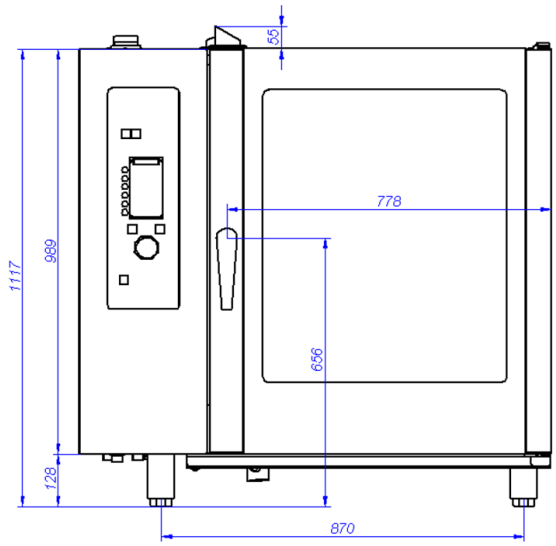


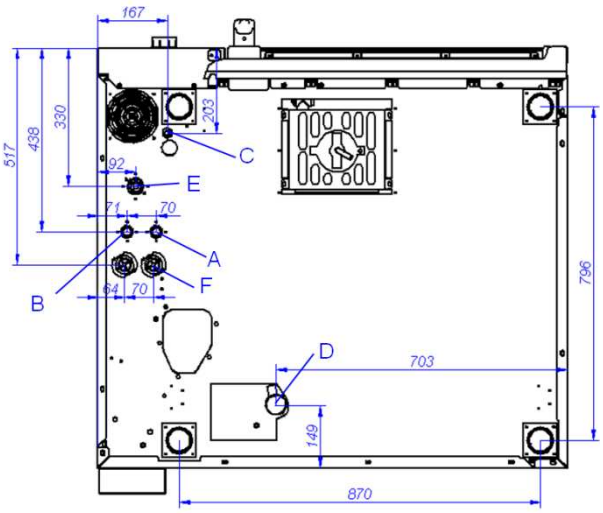


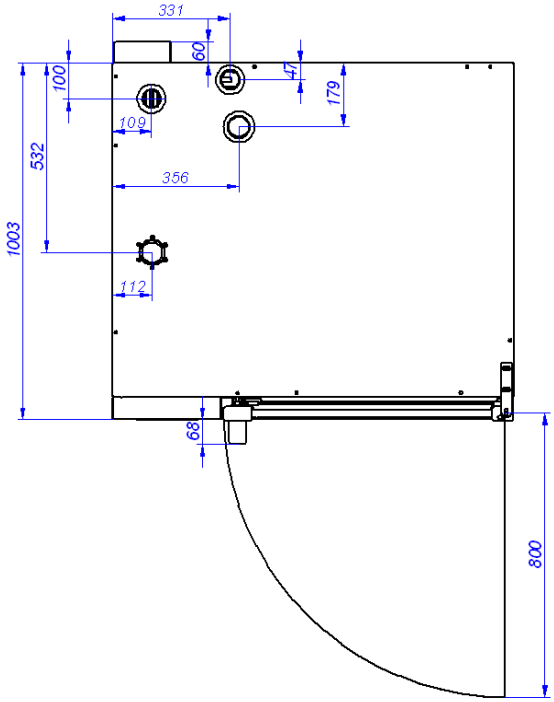


A: Soft water intake
C: Mains supply
D: Drainage
E: Gas inlet
F: Air inlet

ACG 102 - AG 102 - APG 102

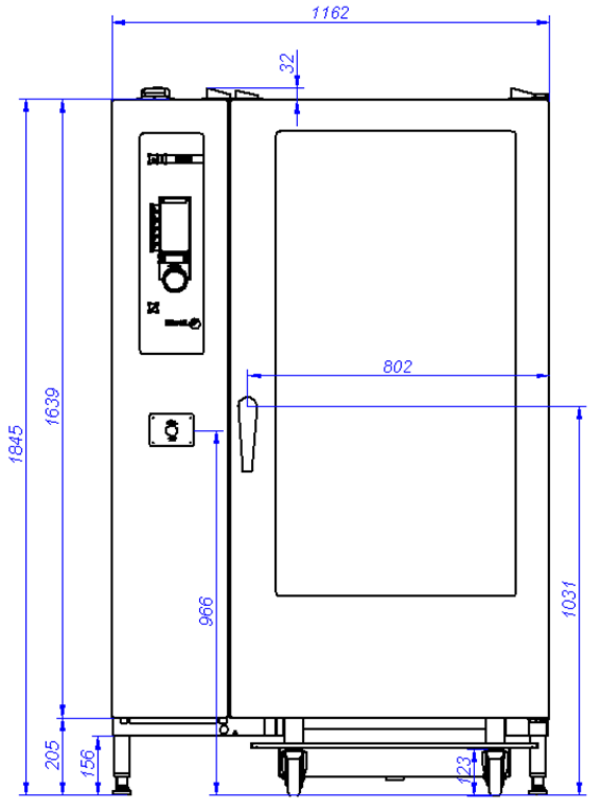


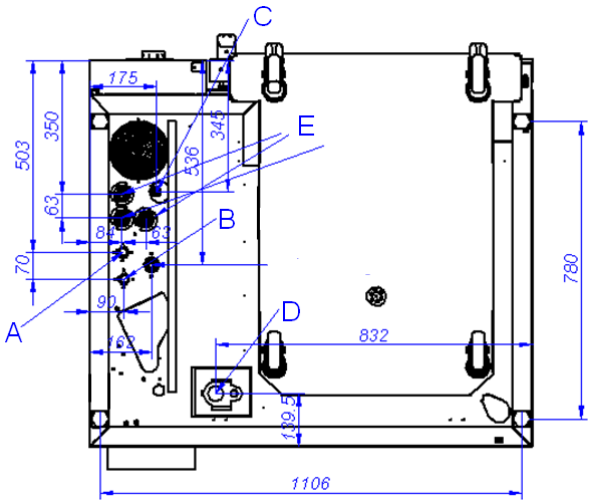


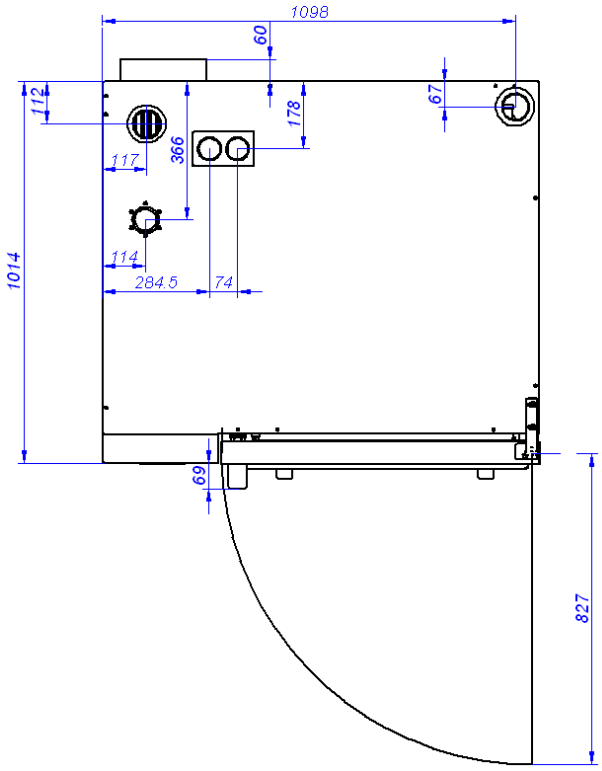


A: Soft water intake
C: Mains supply
D: Drainage
E: Gas inlet
F: Air inlet

ACG 202 - AG 202 - APG 202

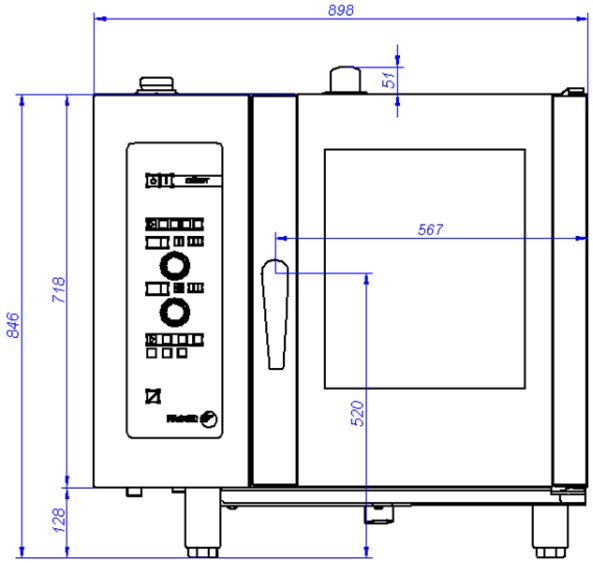


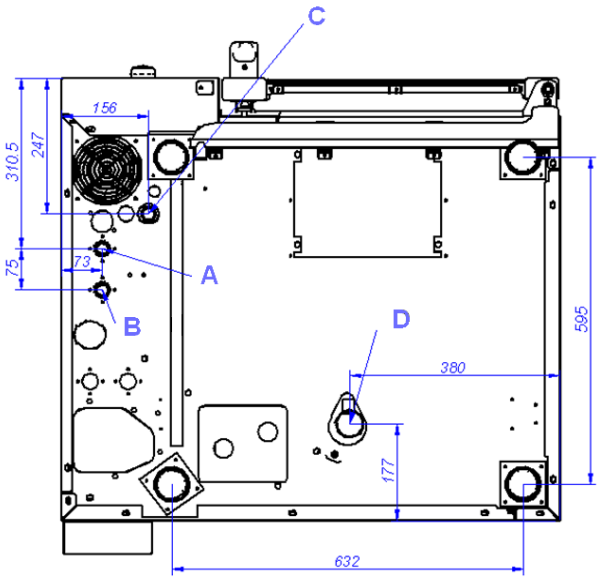


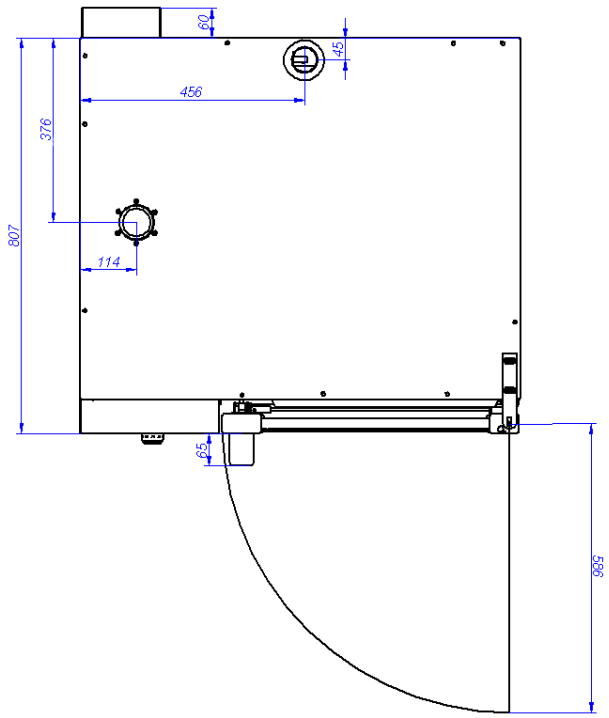


A: Soft water intake
C: Mains supply
D: Drainage
E: Gas inlet
F: Air inlet

ACE 061 - AE 061 – APE 061

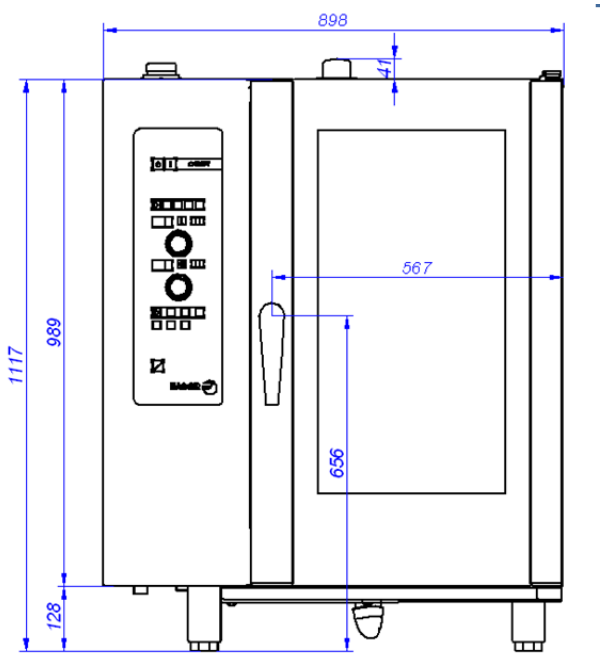


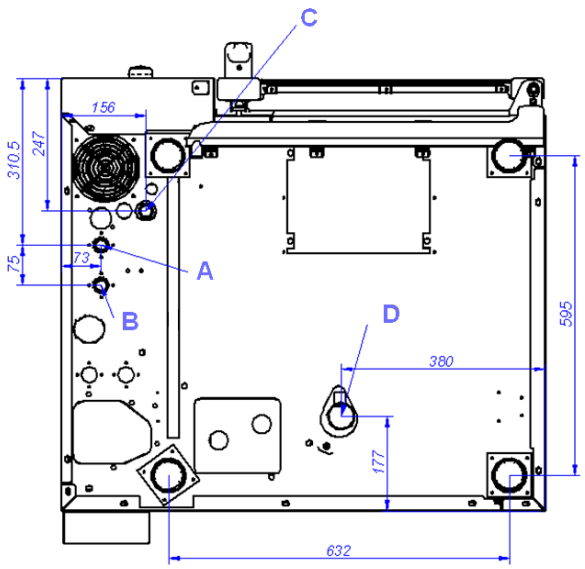


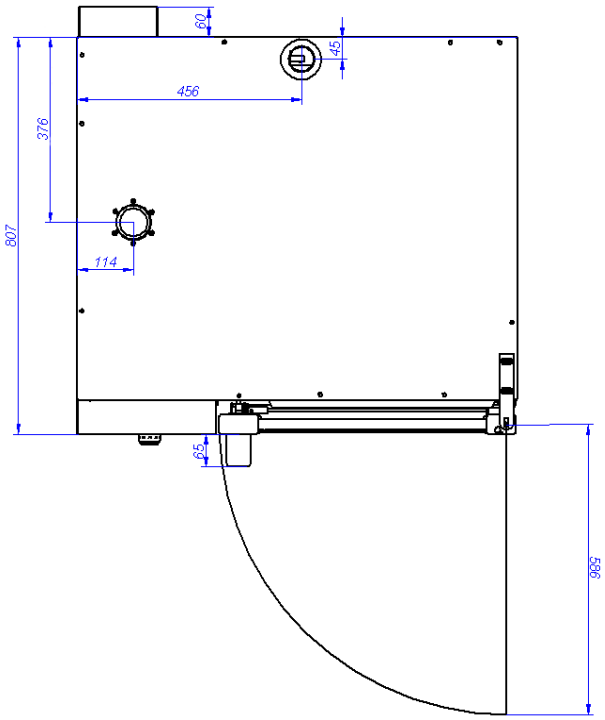


A: Soft water intake
C: Mains supply
D: Drainage

ACE 101 - AE 101 – APE 101

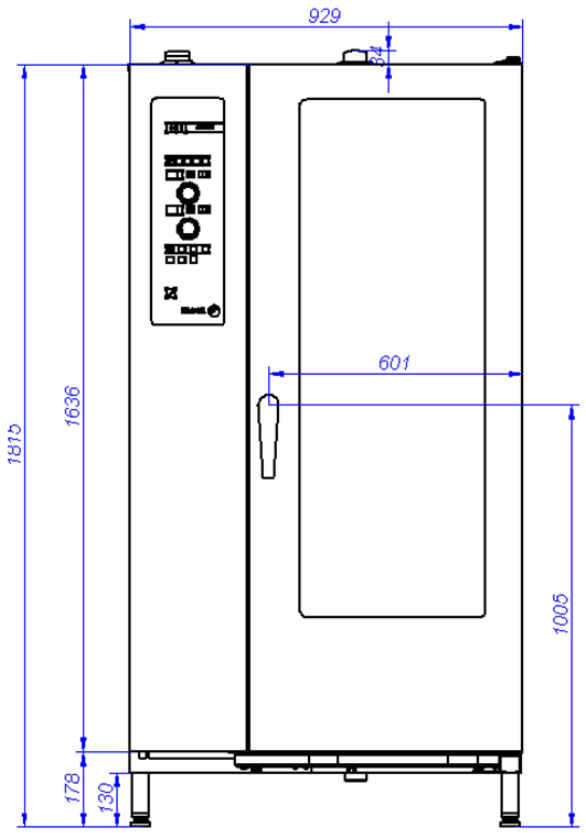


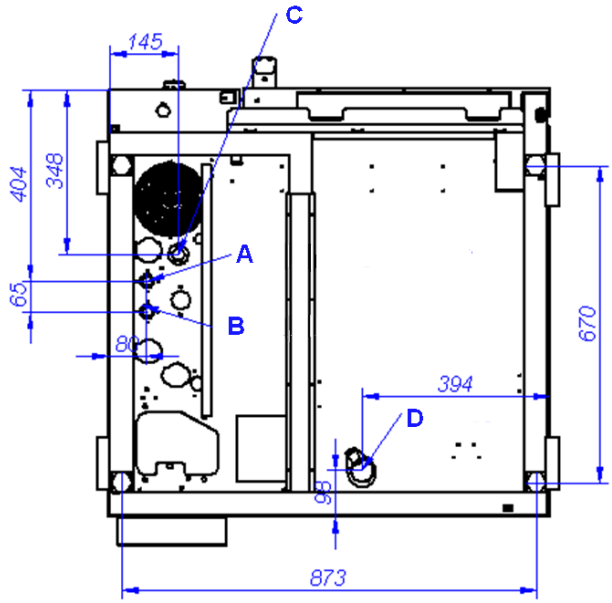


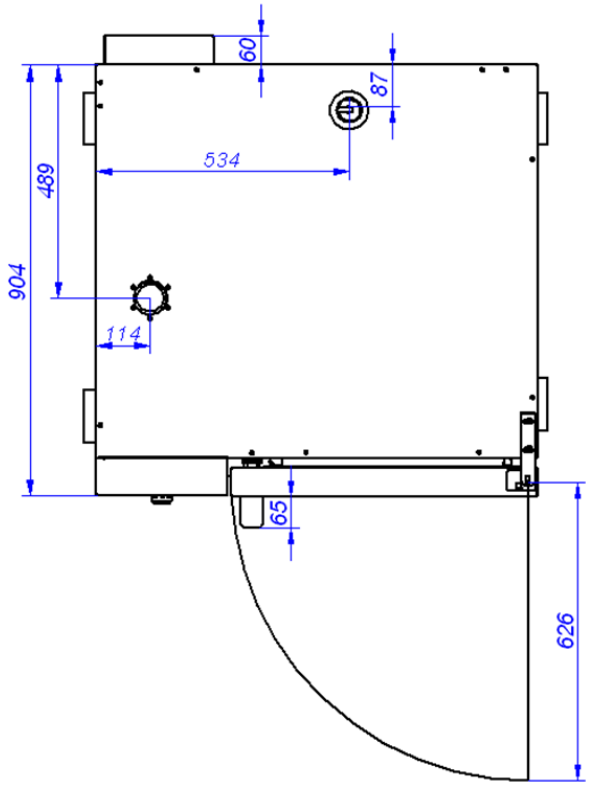


A: Soft water intake
C: Mains supply
D: Drainage

ACE 201 - AE 201 – APE 201

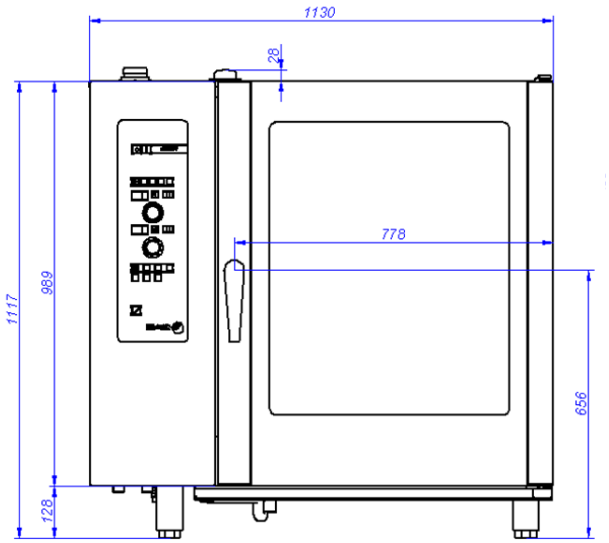


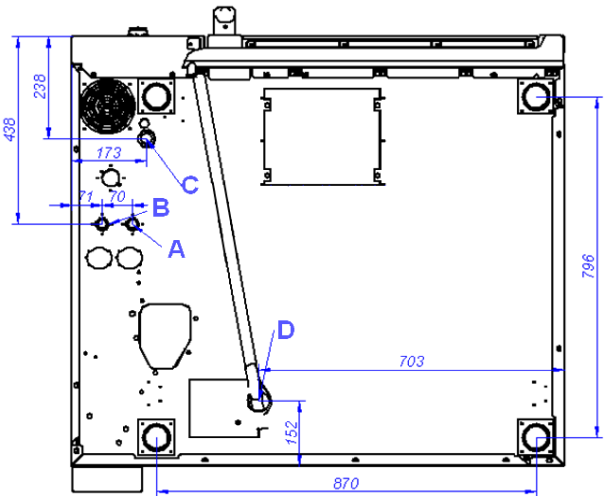


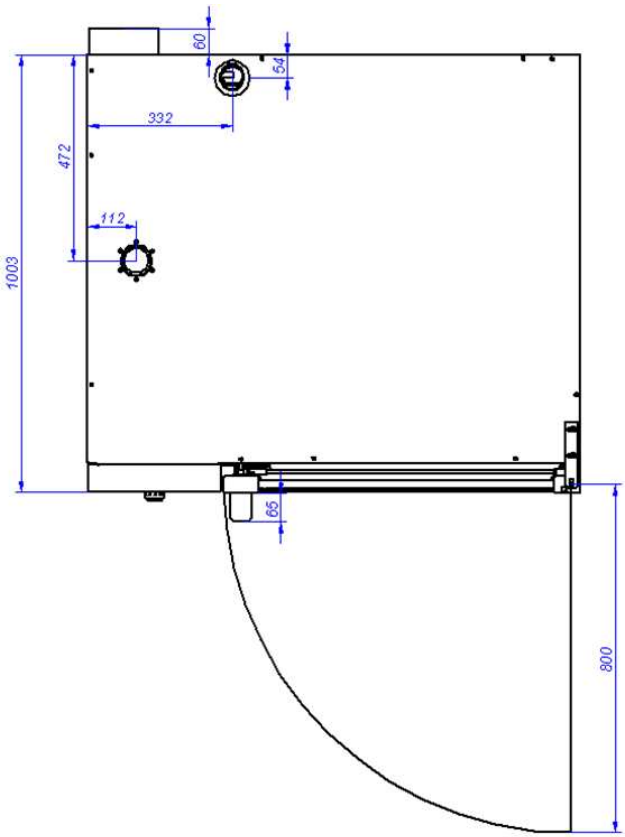


A: Soft water intake
C: Mains supply
D: Drainage

ACE 102 - AE 102 – APE 102

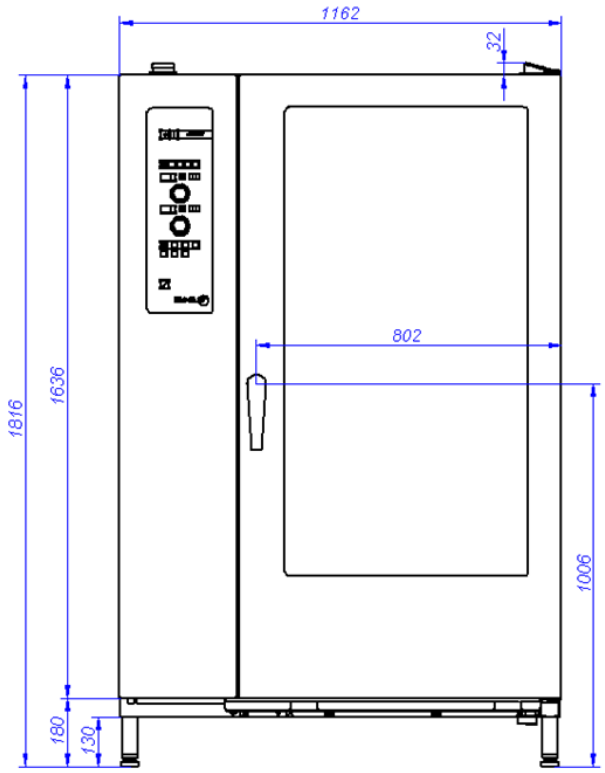


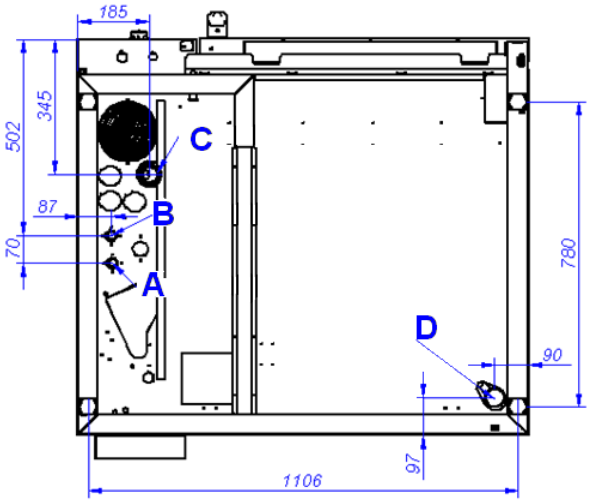


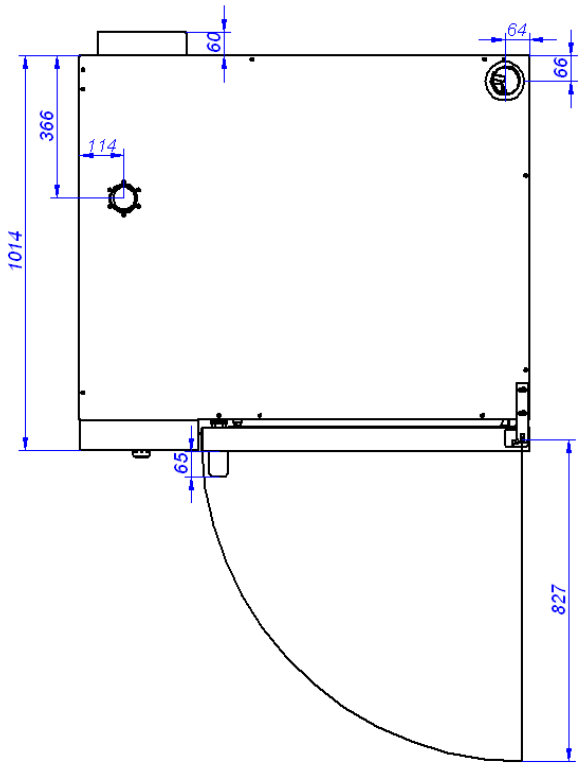


A: Soft water intake
C: Mains supply
D: Drainage

ACE 202 - AE 202 – APE 202







A: Soft water intake
C: Mains supply
D: Drainage

MAINTENANCE

MANUAL CLEANING

- The appliance should be cleaned every day.
- The appliance must always be switched off for manual cleaning.
- For the correct working and maintenance of the appliance, it should be cleaned every day using cleaning products specifically designed for this.

VERY IMPORTANT:

- Sand-based or abrasive products must not be used. Nor should a hose be used to clean the outside of the appliance as this could affect the internal components.
- The **Automatic Cleaning** process **should be used with the specific cleaning product supplied by Fagor Industrial**.
- The appliance must always be switched off for **Manual Cleaning**.
- The procedure for **Manual Cleaning** is as follows:

1. Cool the oven to 60ºC, (use the oven cooling function Cool Down), and then remove all solid waste.
2. Spray a specific chemical product evenly on the inside of the chamber.
3. Close the door and leave the chemical product to act during the time recommended by the manufacturer (depending on the type of dirt).
4. Continue with a steam cycle for 20 minutes.

WARNING:

Chemical products are extremely active. Therefore they should be handled with extreme care, to avoid the risk of skin or eye irritations. The manufacturer's instructions must be strictly observed.

5. Rinse with plenty of water. The shower supplied with the appliance can be used.

Note:

The appliance has been designed to permit water to be sprayed all over the cooking chamber without any risk of damage, to allow thorough cleaning and the perfect rinse.

6. Dry the oven, using the convection mode for 5 minutes at 160 ºC. Then switch off the power, close the water and gas (only gas models). cut-off taps.

If the oven is cleaned everyday, the operation can be completed quickly, giving an appliance in perfect condition and ready for use the next day.

As the door reverse is made of glass, it is very easy to clean, using the same products used to clean vitroceramic hobs.

1.- Use the scraper to remove any grease incrusted on the glass.
2.- Spray the product on the glass.
3.- Wipe the glass clean with a cloth.

Note: Do not use products or tools which may scratch the glass.

This appliance is only for professional usage and must be used by qualified personnel.

ENVIRONMENTAL PROTECTION RECOMMENDATION

On ending its useful life, this product must not be thrown away in a standard rubbish bin, but must be left in an electrical waste and electronic equipment collection point for recycling.

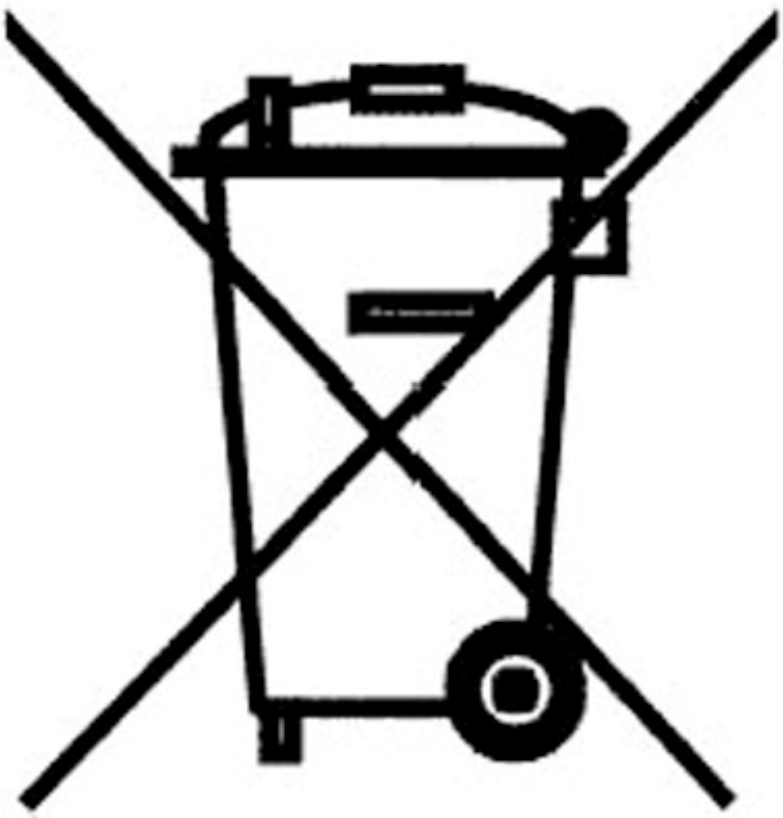
This is confirmed by the symbol on the product, user manual, or packaging.

Depending on the symbol, the materials can be recycled. By recycling and other ways of processing electrical waste and electronic equipment, you can significantly contribute to protecting the environment.

Contact your local authorities for more information of the nearest collection point.

To preserve the environment at the end of the useful life of your product, leave it in the appropriate places in accordance with the current legislation.

NOTE (valid for Spain): THE FINAL USER OF THE PACKAGING WASTE IS RESPONSIBLE FOR ITS DISPOSAL (article 18-1 of Royal Decree 782/98. BOE 1-5-98)



FAGOR

FAGOR INDUSTRIAL

CHECKLIST FOR THE INSTALLATION AND START-UP OF FAGOR OVENS

This checklist should be completed separately for each oven in clearly legible writing.
To validate your rights to guarantee, please ask the Technical Service installing the oven to complete the present checklist and send it, duly completed, to the corresponding branch of Fagor Industrial, within 15 days of the installation and start-up of the oven.

Company or premises where oven is installed: .....

Contact: .....

Position in company: ..... **Email:** .....

Address:. .....

Town: ..... **Country:** .....

P.C.: ..... **Telephone:** ..... **FAX:** .....

Oven model: ..... **Serial No:** .....

Installing company: ..... **Technician:** .....

Date of installation (D/M/Y): ..... / ..... / .....

Date of start-up (D/M/Y): ..... / ..... / .....

Installation ☐ **no complaints** **w** ☐ **complaints**

Dear installer:

Please enter the relevant information in the different fields, giving the values obtained or marking the corresponding box with an “X”. If the values obtained differ from the data recommended by Fagor Industrial, please notify the customer and the corresponding branch of Fagor Industrial.

We hereby confirm that the start-up has been carried out in accordance with the attached checklist and conforms to current local /national specifications and legislation.

The oven has been delivered free of defects.

The user has been instructed in the use, cleaning and maintenance of the equipment.

Fagor Industrial strongly recommends you establish a suitable regular preventive maintenance programme for the appliance you have just installed. This maintenance service should be carried out by an Official or Authorised SAT.

....

Signed / Date / Installer **Signed / Date / Customer**

GIZATASUNA LANEAN MONDRAGON

FAGOR INDUSTRIAL

1. Checking installation

	YES	NO
a) Is the floor level?	☐	☐
If "NO", what is the difference in level? ..... % (max. 2%)		
b) Is there any source of heat at less than 500 mm from the oven?	☐	☐
If "Yes", the installation of heat protection is obligatory.		
c) Is there any other equipment at less than 500 mm from the oven?	☐	☐
If "Yes", what type of equipment?		
d) Has a hood/extractor system been installed?	☐	☐
e) For gas ovens without an extraction system, has the draught diverter been installed?	☐	☐
If "YES", is the pipe Ø equal to 280 mm?	☐	☐
f) Is there a FAGOR extractor hood installed?	☐	☐
If "Yes", what model is it? ..... What is the serial No?.....		
g) For floor models (201, 202), is there enough space for the trolley?	☐	☐
h) Is the oven level?	☐	☐
i) For table top models (061, 101, 102), is the table level?	☐	☐
j) For floor models, (201, 202), is the oven trolley level and adjusted?	☐	☐

2. Electrical Installation

a) What voltage is shown on the registration plate? ..... AC / ..... V / ..... Hz

b) What voltage is available at the installation? ..... AC / ..... V / ..... Hz

c) Measured voltage at the installation:

Phase 1 - Phase 2 _____V Phase 1 - Neutral _____V
Phase 1 - Phase 3 _____V Phase 2 - Neutral _____V
Phase 2 - Phase 3 _____V Phase 3 - Neutral _____V
Neutral - Earth _____V

d) Electrical consumption by phase:

Phase 1 ..... A Phase 2 ..... A Phase 3 ..... A

	YES	NO
e) Are there any electrical protections in the installation?	☐	☐
If "Yes", what types?		
Magneto thermal ..... A Fuses ..... A Differential ..... mA (300 mA)		
f) Can the electrical panel be accessed by the user?	☐	☐

3. Hydraulic Installation

	YES	NO
a) Is there a water filter installed?	☐	☐
If "Yes", what type and make of filter?		
b) Is the water supply to the oven independent?	☐	☐
CAUTION: Water intake ¾"		
c) Is the cut-off tap for the water supply to the oven independent?	☐	☐
d) Can the cut-off tap for the water supply to the oven be accessed by the user?	☐	☐
e) Has the FAGOR (19011229) drainage kit been installed?	☐	☐
If "NO", is the drainage connection fixed?	☐	☐
Is the drain trap independent for the oven?	☐	☐
Is the drainage pipe material resistant to 110 ºC?	☐	☐
What material are the drainage pipes made from?		

f) Water intake pressure _____bar. (2÷4 bar.)
g) Water intake temperature _____ ºC (max. 55ºC)
h) Water quality:
Total H. ..... ºf (5÷10ºF)Carbonate H..... ºf (Total H./ 2)
Conduc. ..... µs (400÷2000µs) pH ..... (7.5)

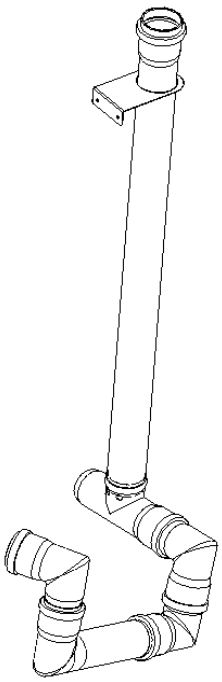
4. Gas installation

	YES	NO
b) Is the gas supply to the oven independent?	☐	☐
c) Is the cut-off tap for the gas supply to the oven independent?	☐	☐
c) Can the cut-off tap for the gas supply to the oven be accessed by the user?	☐	☐
d) Has the oven been converted to gas?	☐	☐
e) Is the gas control to the oven independent?	☐	☐
If "Yes", what type and make of equipment?		
f) Is the gas pipe rigid?	☐	☐
If "Yes", what is the diameter of the gas pipe? ..... mm.		

g) Type of gas specified on registration plate:
☐ LPG (Butane-G30) ☐ LPG (Propane-G31) ☐ NG (G20) ☐ NG (G21) ☐ Other G .....
h) Type of gas available in the installation:
☐ LPG (Butane-G30) ☐ LPG (Propane-G31) ☐ NG (G20) ☐ NG (G21) ☐ Other G .....
i) Altitude of installation ..... metres above sea level.
j) Pressure of gas connected:
Static p. ..... mbr. (NG-20 mbr. - LPG-37 mbr.) Dynamic p. ..... mbr. (NG-20 mbr. - LPG-37 mbr.)
k) Steam burner combustion:
CO2 ..... % (NG- 8.42÷9.83, Propane - 9.85÷11.25, Butane - 10÷11.6)
CO ..... ppm (máx. 400 ppm) λ ..... (1.2*1.4)
l) Convection burner combustion:
CO2 ..... % (NG- 8.42÷9.83, Propane - 9.85÷11,25, Butane - 10÷11.6)
CO ..... ppm (máx. 400 ppm) λ ..... (1.2*1.4)

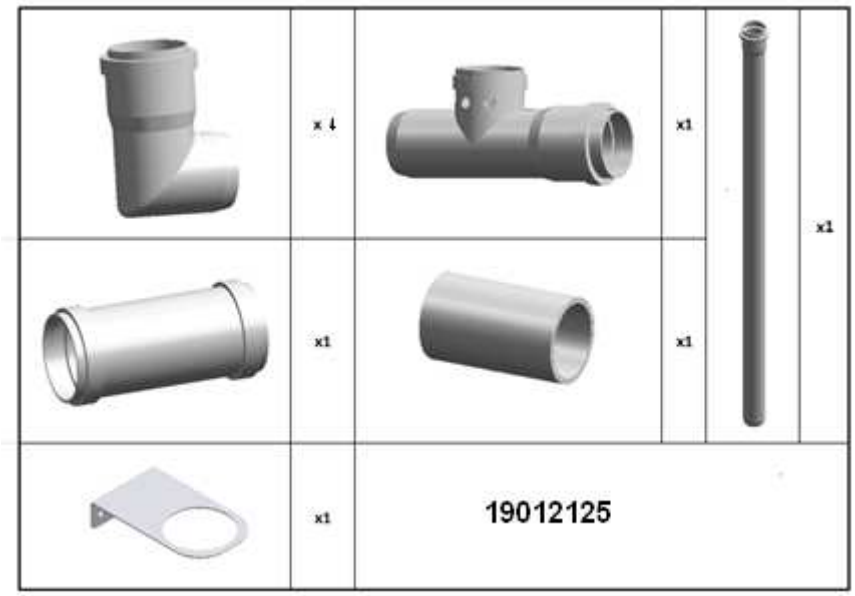
5. Operating tests and instructions for customer

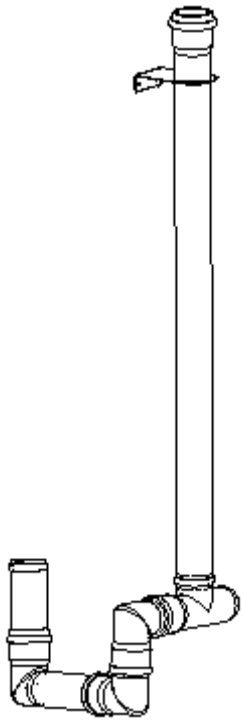
	YES	NO
a) Are the electrical connections secure and in accordance with legislation?	☐	☐
b) Are the hydraulic connections watertight?	☐	☐
c) Are the gas connections water and airtight?	☐	☐
d) Are the burner air inlets free?	☐	☐
e) Has the oven configuration been adjusted?	☐	☐
f) Have the temperature probes been calibrated?	☐	☐
g) Are all the oven operating modes operating correctly?	☐	☐
Does the chamber turbine (turbines) turn correctly?	☐	☐
Do the fans turn correctly?	☐	☐
In steam mode, does the temperature rise?	☐	☐
In steam mode, does it disconnect at the selected temperature?	☐	☐
Does the fluepipe operate correctly?	☐	☐
Are there any steam leaks from the fluepipe?	☐	☐
Are there any steam leaks through the door?	☐	☐
In convection mode, does the temperature rise?	☐	☐
In convection mode, does it disconnect at the selected temperature?	☐	☐
In the rinse programme, are there any water leaks?	☐	☐
h) Have the temperature probes been calibrated?	☐	☐
i) Has the customer received instructions on the use and handling of the oven?	☐	☐
j) Has the customer received instructions on the daily cleaning of the oven?	☐	☐
k) Has the customer received adequate information on the maintenance of the equipment (de-scaling, cleaning air intakes, cleaning door seal, etc)?	☐	☐
l) Has the customer been given all the oven documentation (manual, recipe book, etc)?	☐	☐



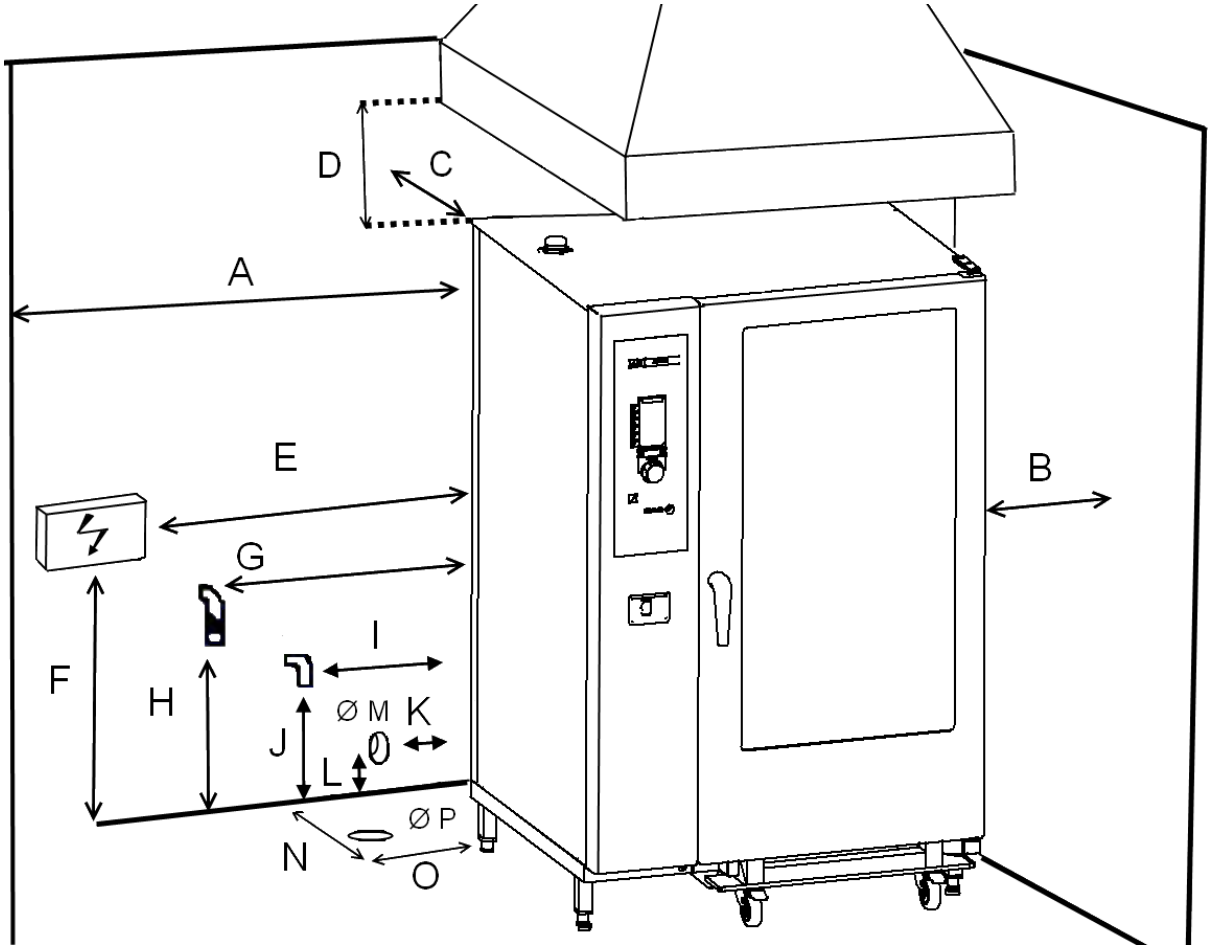
Configuración hornos Advance Plus
Advance Plus configuration

FAGOR drainage Kit Code 19012125





Configuración hornos Advance/ Concept
Advance/ Concept configuration



Lateral distances:

A = ... cm B = ... cm C = ... cm D = ... cm

Electric connection:

E = ... cm F = ... cm

Gas connection:

G = ... cm H = ... cm

Water connection:

I = ... cm J = ... cm

Table top model drainage:

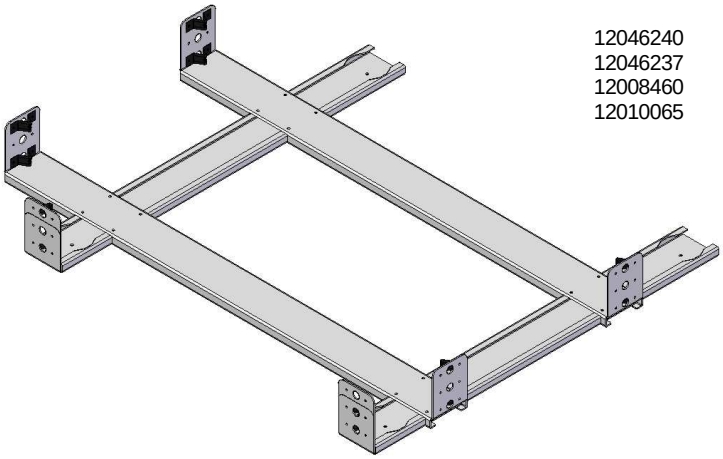
K = ... cm L = ... cm Ø M = ... cm

Floor model drainage:

N = ... cm O = ... cm Ø P = ... cm

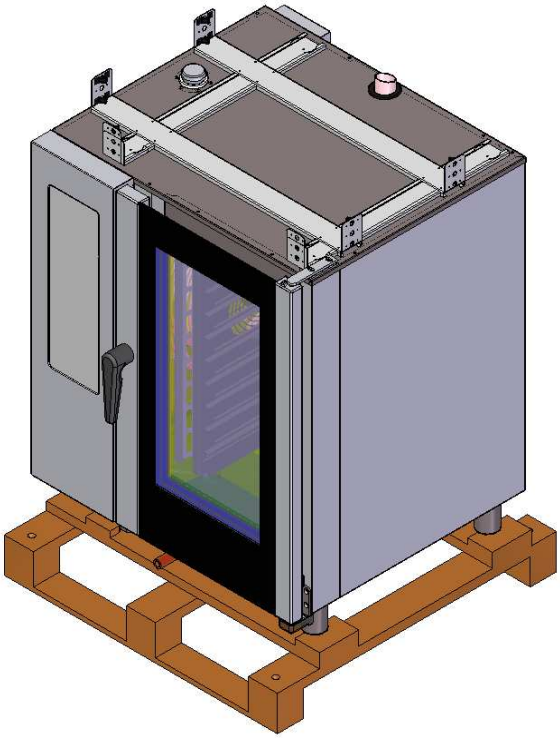
ADVANCE STACKING ASSEMBLY MANUAL

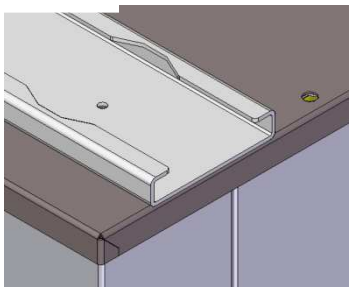
1. Assemble the base structure.



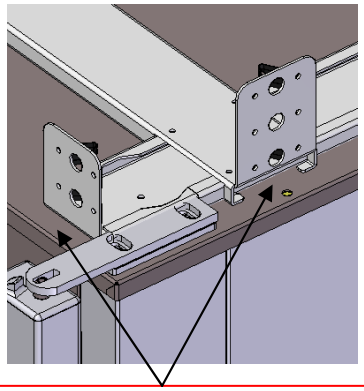
REF SAP	Description	Quantity
12046240	Advance Stacking Horizontal Support	2
12046237	Advance Stacking Vertical Support	2
12008460	SPRING LOCK FREI.700	12
12010065	RIVET AVINOX Ø3.2x6 mm	24

2. Place the structure over the oven.



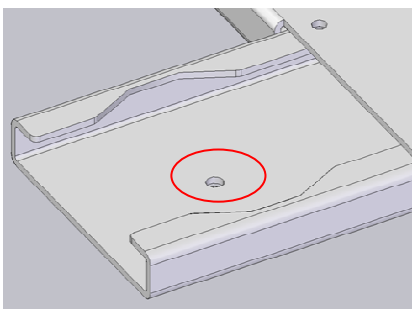


Align the structure at the rear of the upper panel



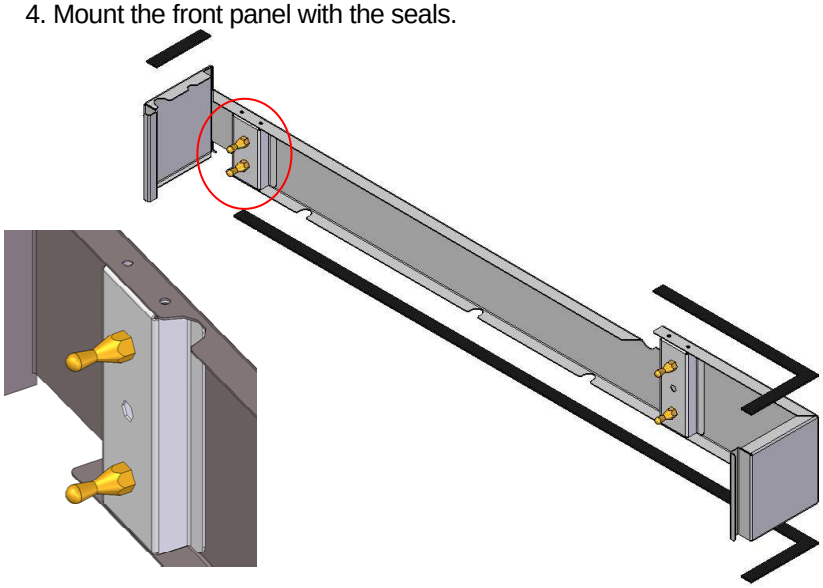
Centrally align the structure over the sides of the upper panel (19 mm on each side)

3. Drill and rivet the structure to the lower oven.

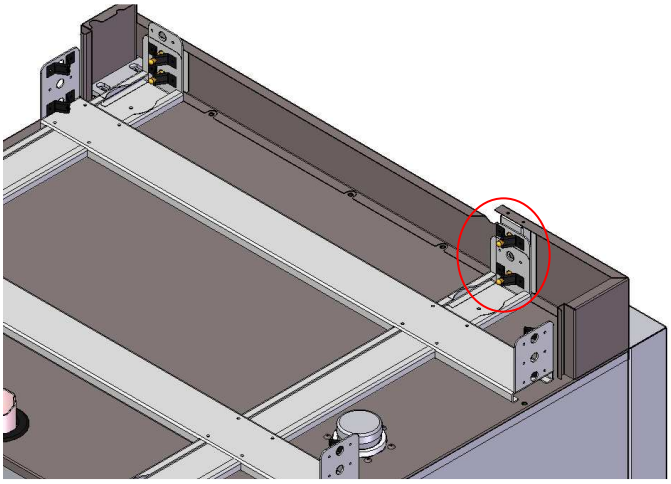


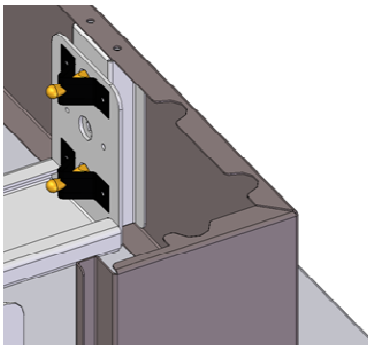
REF SAP	Description	Quantity
12046244	Advance Stacking Front	1
12002212	STACKING FASTENER WEDGE	1
12046276	Advance Stacking Fastening Wedge	1
12010090	RIVET AVINOX Ø4x10MM	8
12010163	HEXAGONAL RIVET M5	4
12008693	LOCK SPIKE	2
12024285	CONTROL HOLDER SEAL 20/11	2

4. Mount the front panel with the seals.



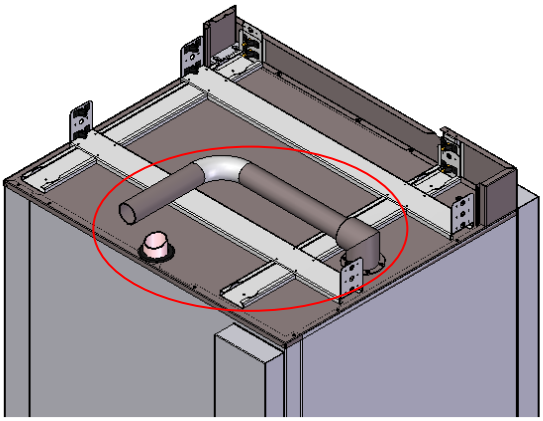
5. Fit the front panel over the base structure.

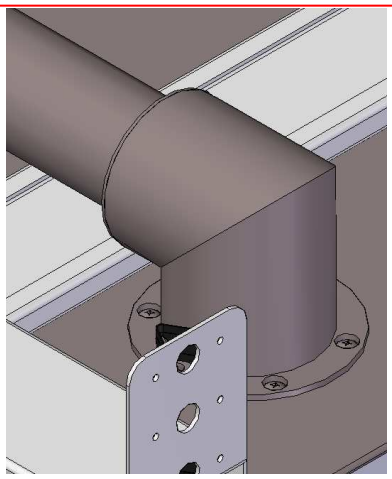




6. Secure the stacking fluepipe.

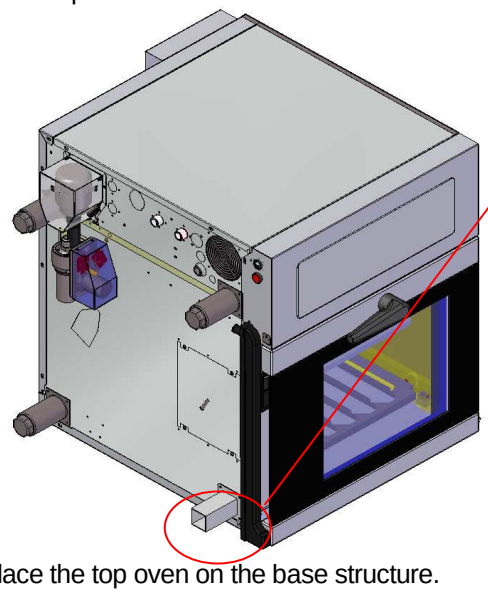
CAUTION: Use the bolts mounted on the fluepipe and seal with Loctite.

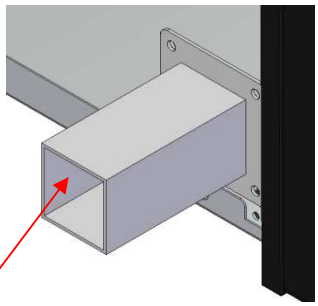




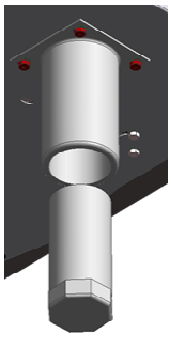
12046316 ADVANCE STACKING FLUEPIPE 1

7. Prepare the top oven.



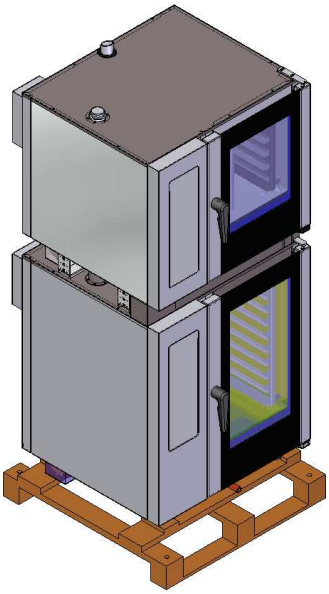


Change the leg for the 12047542 Stacking leg

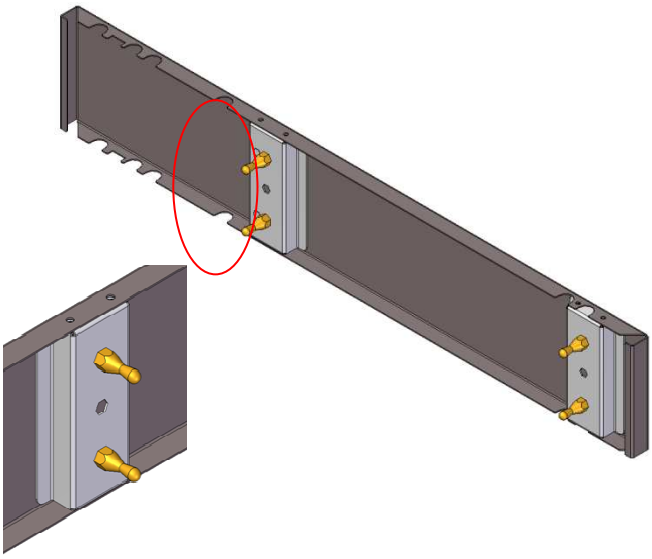


Unscrew the interior of the 3 remaining legs

8. Place the top oven on the base structure.

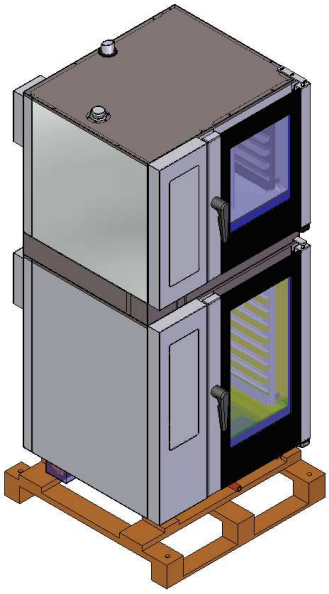


9. Mount the side panel with the seals.

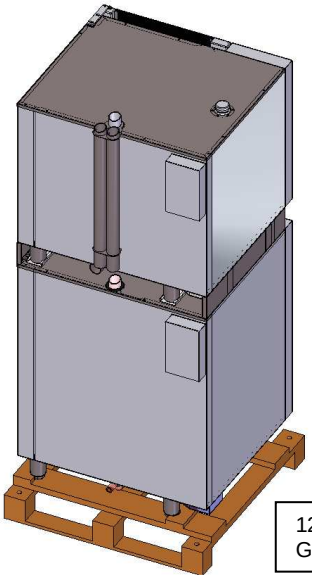


REF SAP	Description	Quantity
12046307	ADVANCE STACKING SIDE	2
12002212	STACKING FASTENER WEDGE	4
12010090	RIVET AVINOX Ø4x10MM	16
12010163	HEXAGONAL RIVET M5	8
12008693	LOCK SPIKE	4
12023522	SEAL PORT 10/11 VERT	4

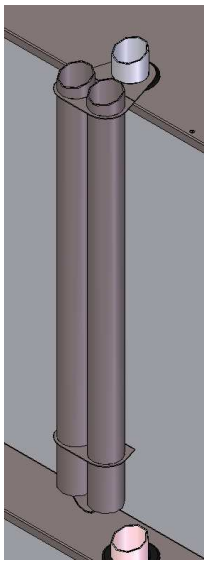
10. Fit the side panels.



11. Secure the fluepipe guide onto the top oven.

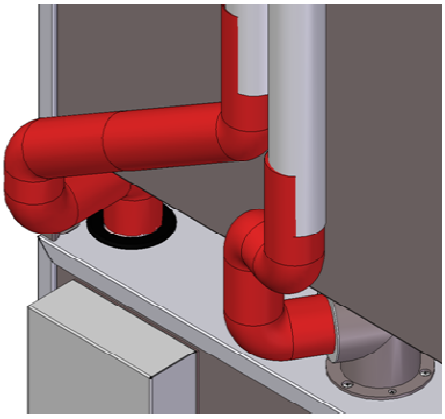


CAUTION: Use the bolts mounted on the fluepipe and seal with Loctite.



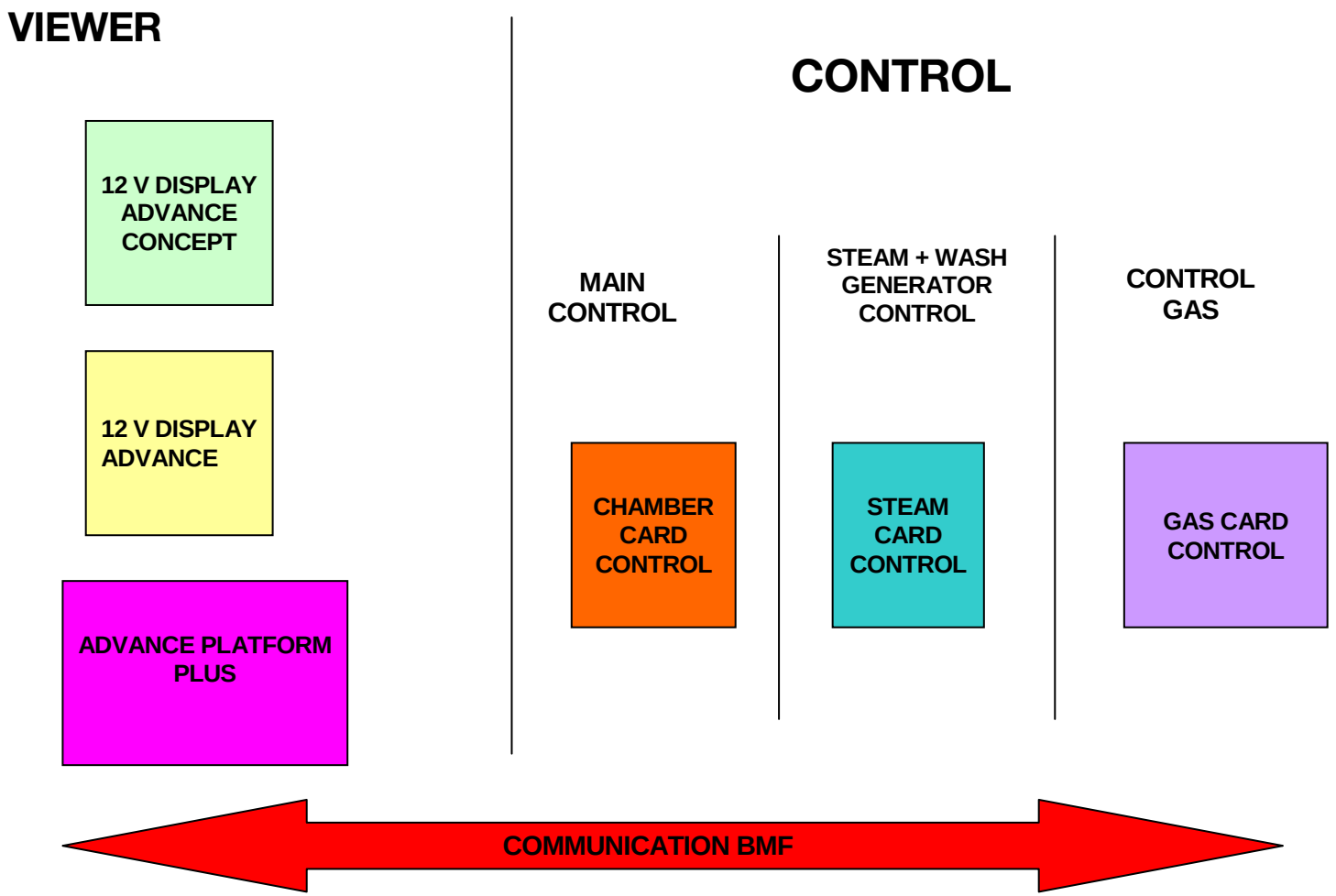
12046321 ADVANCE STACKING FLUEPIPE GUIDE

12. Join the outlets to the hoses.



REF SAP	Description	Quantity
12024122	HOSE Ø53X360	2
12009962	CLAMP 40-60	4

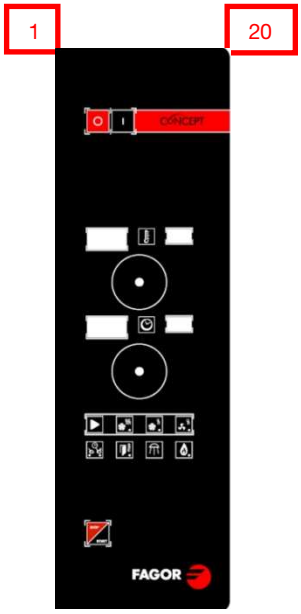
ELECTRONIC CARDS

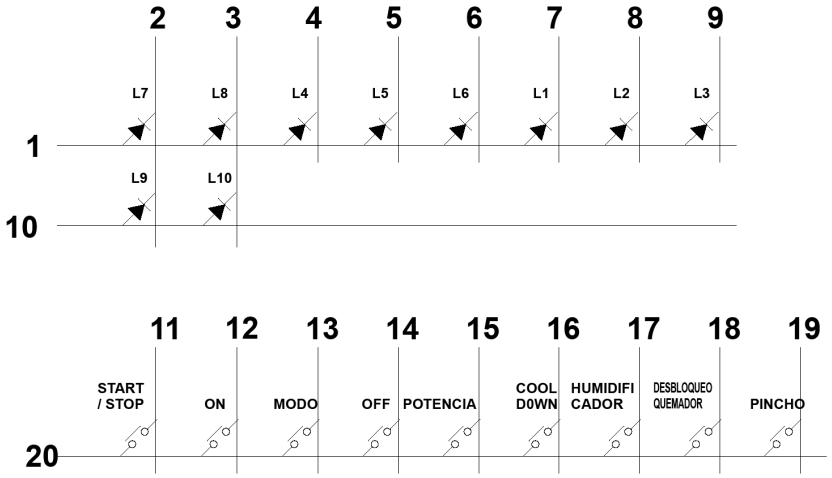


HORNO	CONPONENTE	ADVANCE CONCEPT	ADVANCE	ADVANCE PLUS
61	SERIGRAPHY	12044176 ACG 12044109 ACE	12044139 AG / AE	NO LLEVA
	12 V DISPLAY	SAT 12046671	SAT 12046672	NO LLEVA
	CHAMBER COMBUSTION CONTROL	SAT 12046659	SAT 12046659	SAT 12046659
	BOILER CARD CONTROL	NO LLEVA	SAT 12046670	SAT 12046670
	GAS CARD CONTROL	SAT 12046673 ACG	SAT 12046673 AG	SAT 12046673 APG
	ADV PLUS PLATFORM	NO LLEVA	NO LLEVA	SAT 12046579
101	SERIGRAPHY	12044176 ACG 12044109 ACE	12044139 AG / AE	NO LLEVA
	12 V DISPLAY	SAT 12046671	SAT 12046672	NO LLEVA
	CHAMBER COMBUSTION CONTROL	SAT 12046659	SAT 12046659	SAT 12046659
	BOILER CARD CONTROL	NO LLEVA	SAT 12046670	SAT 12046670
	GAS CARD CONTROL	SAT 12046673 ACG	SAT 12046673 AG	SAT 12046673 APG
	ADV PLUS PLATFORM	NO LLEVA	NO LLEVA	SAT 12046579
102	SERIGRAPHY	12044176 ACG 12044109 ACE	12044139 AG / AE	NO LLEVA
	12 V DISPLAY	SAT 12046671	SAT 12046672	NO LLEVA
	CHAMBER COMBUSTION CONTROL	SAT 12046659	SAT 12046659	SAT 12046659
	BOILER CARD CONTROL	NO LLEVA	SAT 12046670	SAT 12046670
	GAS CARD CONTROL	SAT 12046673 ACG	SAT 12046673 AG	SAT 12046673 APG
	ADV PLUS PLATFORM	NO LLEVA	NO LLEVA	SAT 12046579
201	SERIGRAPHY	12044176 ACG 12044109 ACE	12044139 AG / AE	NO LLEVA
	12 V DISPLAY	SAT 12046671	SAT 12046672	NO LLEVA
	CHAMBER COMBUSTION CONTROL	SAT 12046659	SAT 12046659	SAT 12046659
	BOILER CARD CONTROL	NO LLEVA	SAT 12046670	SAT 12046670
	GAS CARD CONTROL	SAT 12046673 ACG	SAT 12046673 AG	SAT 12046673 APG
	ADV PLUS PLATFORM	NO LLEVA	NO LLEVA	SAT 12046579
202	SERIGRAPHY	12044176 ACG 12044109 ACE	12044139 AG / AE	NO LLEVA
	12 V DISPLAY	SAT 12046671	SAT 12046672	NO LLEVA
	CHAMBER COMBUSTION CONTROL	SAT 12046659	SAT 12046659	SAT 12046659
	BOILER CARD CONTROL	NO LLEVA	SAT 12046670	SAT 12046670
	GAS CARD CONTROL	SAT 12046673 ACG	SAT 12046673 AG	SAT 12046673 APG
	ADV PLUS PLATFORM	NO LLEVA	NO LLEVA	SAT 12046579

SERIGRAPHY

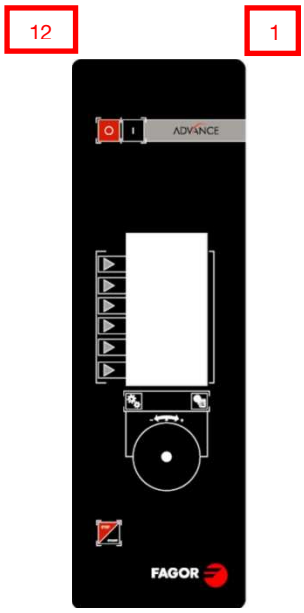
ADVANCE CONCEPT

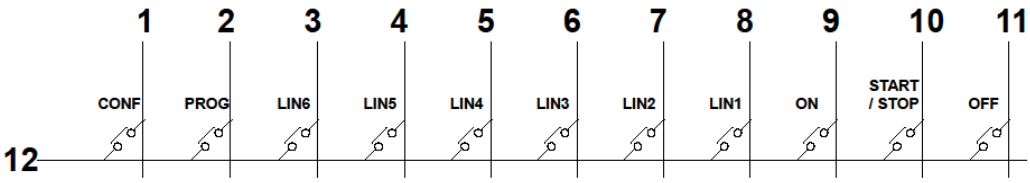




ESQUEMA ELÉCTRICO

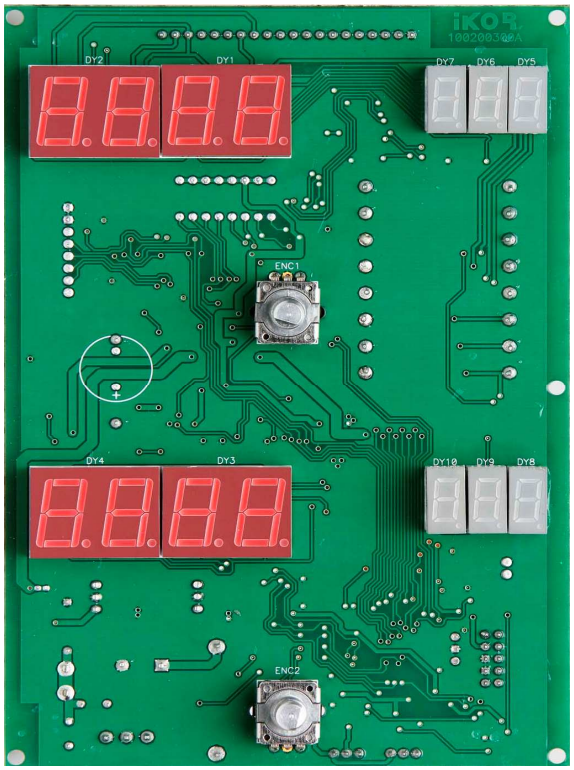
ADVANCE

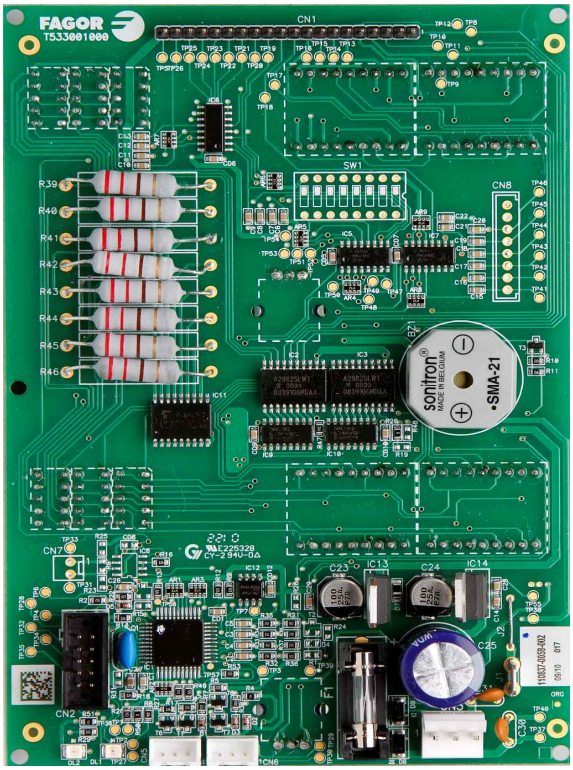




ESQUEMA ELÉCTRICO

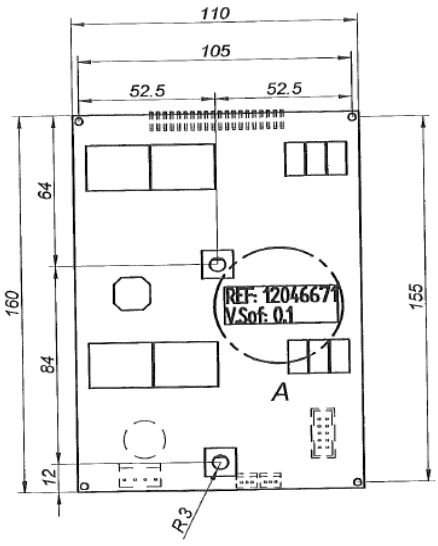
12 V DISPLAY (ACE and ACG) 12046671

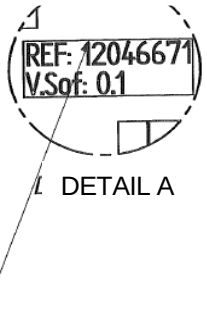




- ⇒ Chamber temperature selector
- ⇒ Time / core temperature selector switch
- ⇒ Chamber temperature display (Setting + True)
- ⇒ Time / core temperature display (Setting + True)
- ⇒ Buzzer
- ⇒ BMF
- ⇒ Interface with membrane keyboard
  - Buttons (ON, OFF, Mode, Function, Pow/spe., Humidifier, CD, Start, Stop)
  - Leds (Convection, Mixed, Steam, Pow1, Pow2, Pow3, CD, Spike, Delta)

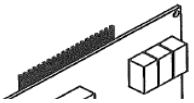
NOTE:
The card is supplied with software saved on it
No of version to be saved: 0.1
A label indicates the SAT reference (12046671) and the software version number: 0.1



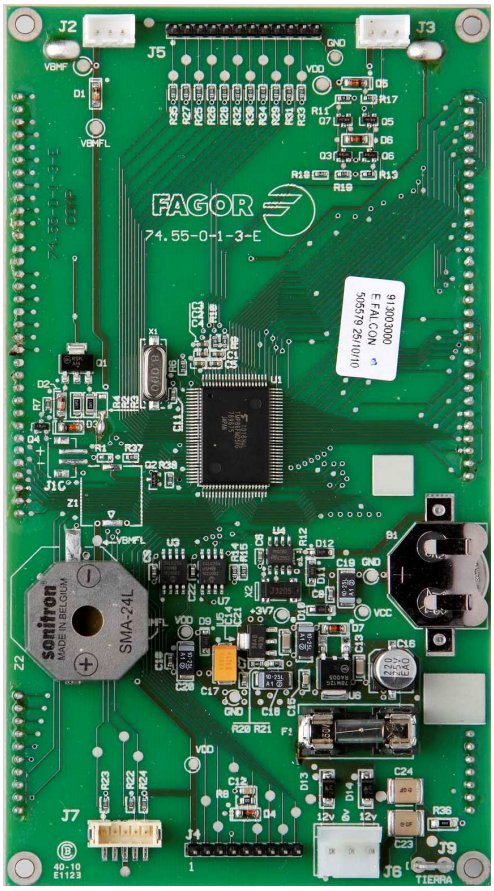


Indicated on label

REFERENCE: 12046671
VERSION NO. 0.1

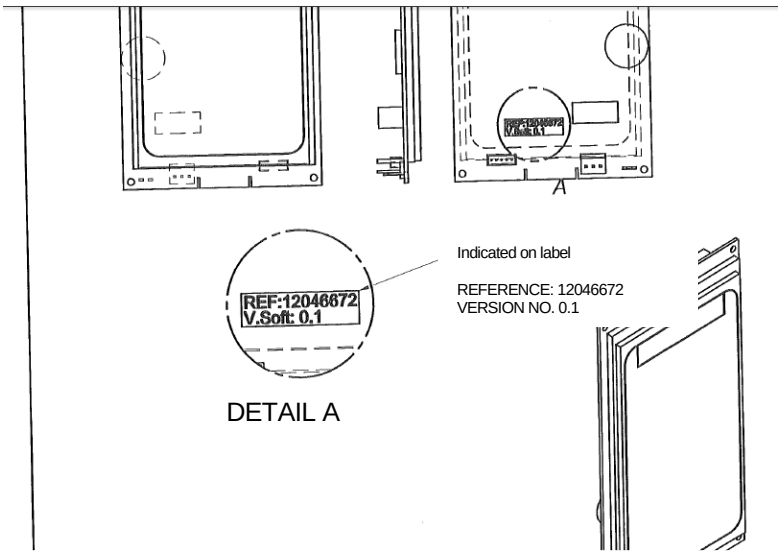


12 V DISPLAY (AE and AG) 12046672



- ⇒ Liquid crystal (4 displays 7 segments,15 characters,17 icons)
- ⇒ Back Light
- ⇒ Function selector
- ⇒ Buzzer
- ⇒ BMF
- ⇒ Interface with membrane keyboard
  - Buttons (ON, OFF, Sel.lines, Config, Delay. Program., Start, Stop)

NOTE:
The card is supplied with software saved on it
No of version to be saved: 0.1
A label indicates the SAT reference (12046672) and the software version number: 0.1



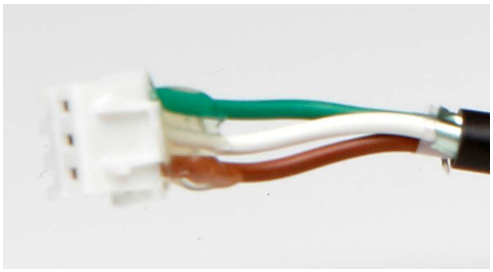
ADVANCE PLUS PLATFORM (APG - APE 061/101/102/201/202)

⇒ Power supply 24-0 V, +/- 15% VAC, 50/60 Hz
⇒ 2 BMF ports
- For communication with other card
- For communication with other card

⇒ 1 TFT screen (8") + couch membrane
⇒ 1 PC Embedded XScale module
⇒ USB Port (for the recipe book, HACCP, etc.)

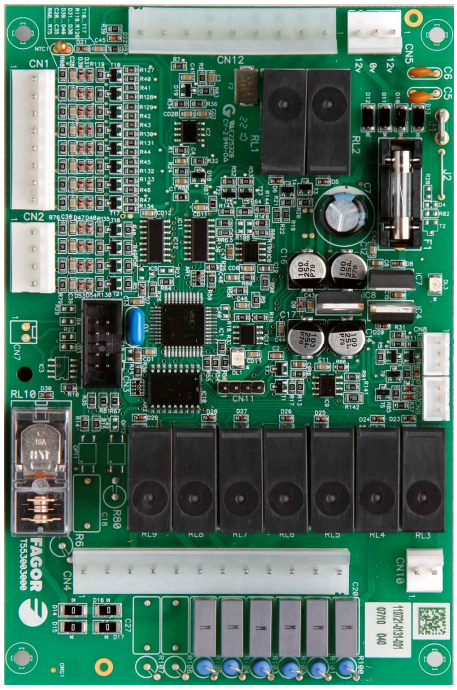
Ref SAT : 12046579

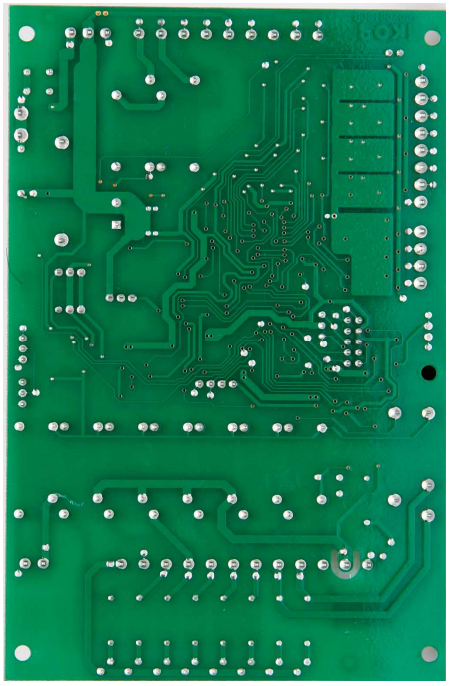
BMF COMMUNICATION CABLE 12023696 (all models)



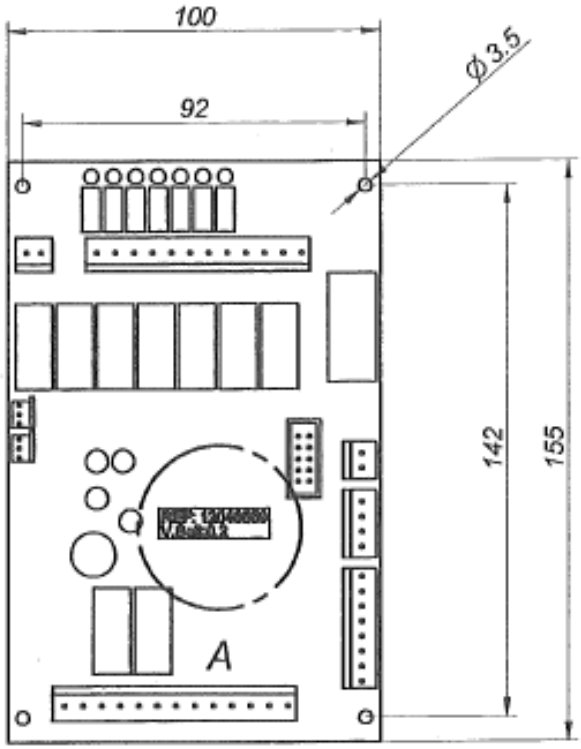
⇒ The BMF communication cable is used for intercommunication between the different electronic cards.

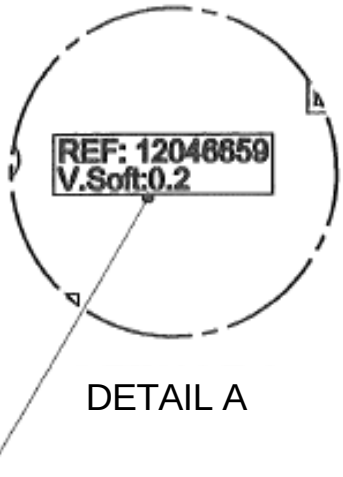
CHAMBER CARD CONTROL - 12046659 (all models)





- ⇒ Power supply 12-0-12 V. +/- 15% VAC, 50/60 Hz
- ⇒ 2 BMF ports
  - For recording software versions andlog extraction and HACCP values
  - For communication with other card.
- ⇒ 1 RS485 port for communication with frequency variator
- ⇒ 1 NTC for measuring electronic plate temperature
- ⇒ 1 0-10 V analogue output for frequency variator speed setting
- ⇒ 10 outputs with 220 V/240 V 50/60 Hz/1ª relay
  - 2 outputs for chamber heating
    - CC1
    - CC2
  - 2 outputs for frequency variator that control chamber turbine
    - Left/Right
    - Run/Stop
  - 2 outputs for solenoid valves
    - Condensation (VCN)
    - Humidifier (VHM)
  - 1 switched output for fluepipe (Ms/Mb) motor 30 W.
- ⇒ 1 main supply relay output (RG).
- ⇒ 1 fan output (VE)
- ⇒ 1 chamber lighting output (LZ)
- ⇒ 10 signal inputs
  - 8 temperature thermocouple inputs (K-type)
    - Camera probe (TC)
    - Steam outlet probe (TV)
    - Steam generator probe (TG)
    - Core probe 5 points (TN1, TN2, TN3, TN4, TN5)
  - 1 contact input (open or closed with interlocking) for door (IP)
  - 1 analogue input (0 - 10 V) to read frequency of frequency variator (A.E.)

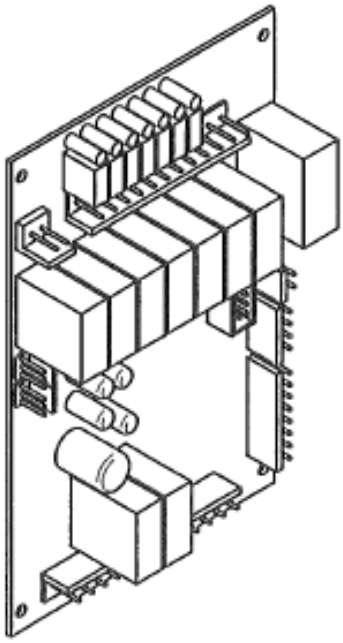




DETAIL A

Indicated on label

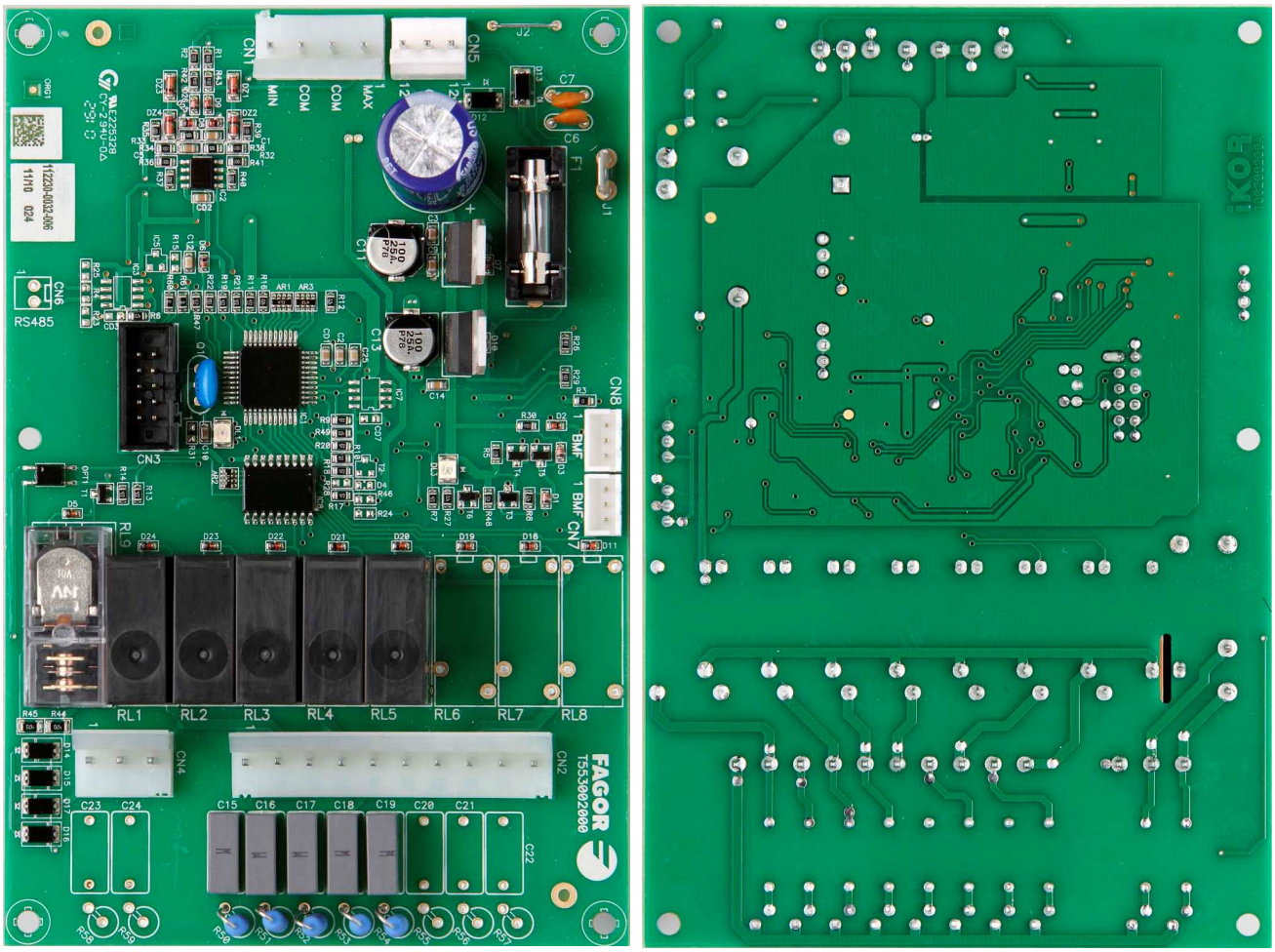
REFERENCE: 12046659
VERSION NO. 0.2



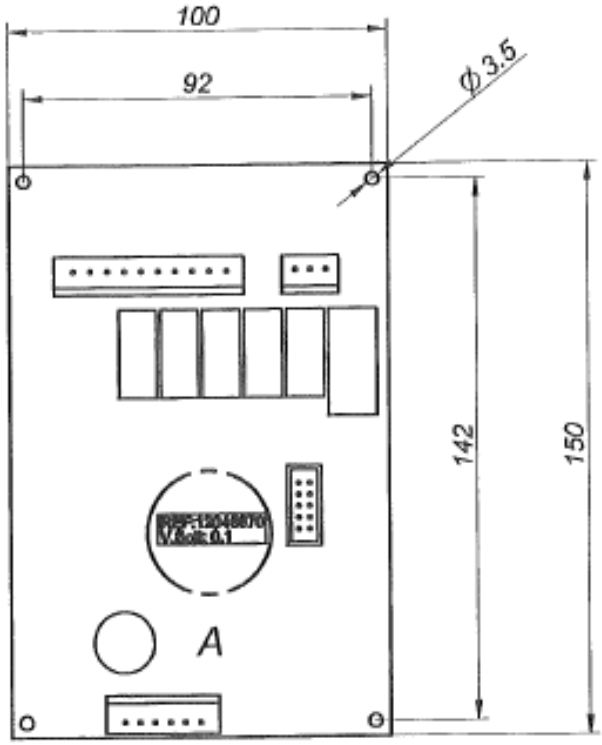
NOTE:
The card is supplied with software saved on it
No of version to be saved: 0.2

A label indicates the SAT reference (12046659) and the software version number: 0.2

BOILER CARD CONTROL - 12046670 (AE, AG, APE and APG)



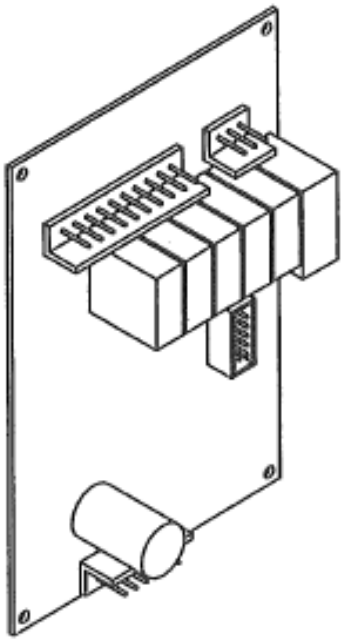
⇒ Power supply 12-0-12 V. +/- 15% VAC, 50/60 Hz
⇒ 2 BMF ports
  ⇒ For communication with chamber control
  ⇒ For communication with interface
⇒ 9 outputs with 220 V/240 V 50/60 Hz/1A relay
  ⇒ 2 outputs for motor pump
    - 60 W drainage pump (VAC).
    - 90 W wash pump (Mba).
  ⇒ 1 output for boiler fill solenoid valve (VDV).
  ⇒ 1 switched output for 30 W drainage open and close motor (Ma/Mc)
  ⇒ 2 heater outputs (CV1, CV2)
  ⇒ 3 dispenser outputs
    - Detergent (DET)
    - Rinse aid (ABR)
    - Descaler (DSC)
⇒ 1 input for 3 level probes (MAX, MIN, COM)



DETAIL A

Indicated on label

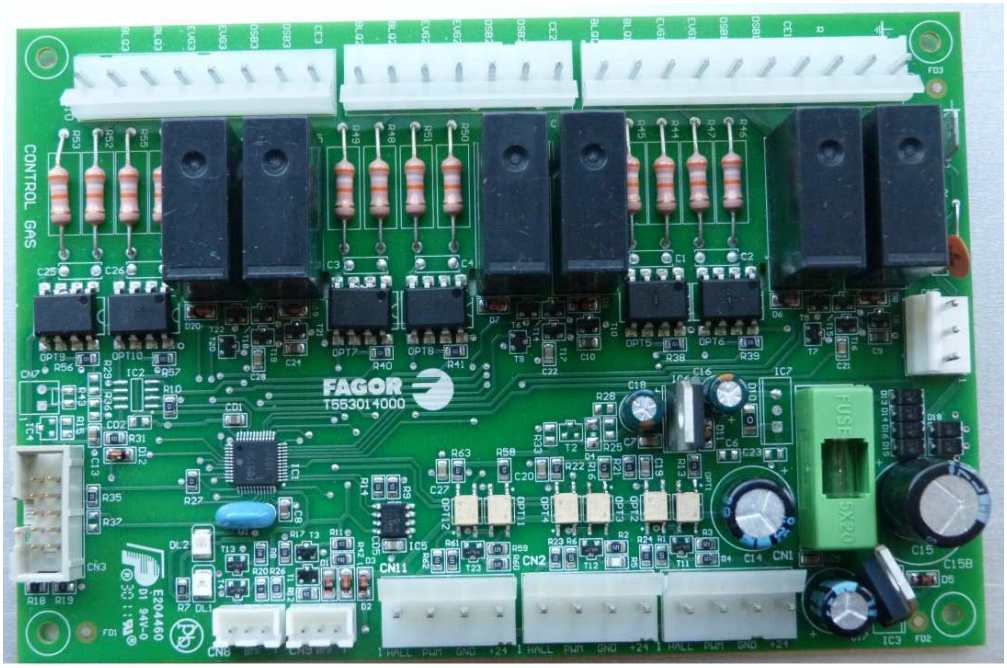
REFERENCE: 12046670
VERSION NO. 0.1



NOTE:
The card is supplied with software saved on it
No of version to be saved: 0.1

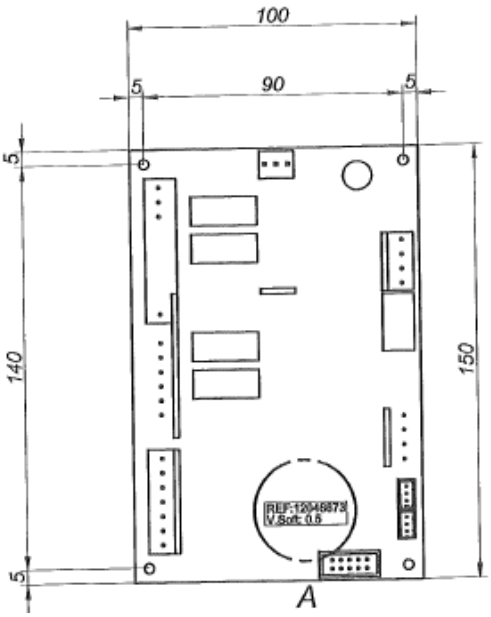
A label indicates the SAT reference (12046670) and the software version number: 0.1

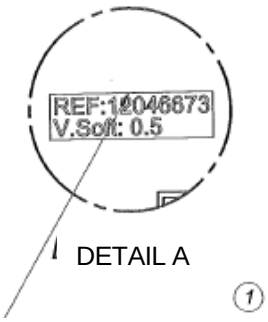
GAS CARD CONTROL - 12046673 (ACG, AG and APG)



- ⇒ Power supply 12-0-12 V. +/- 15% VAC, 50/60 Hz
- ⇒ 2 BMF ports
  - ⇒ For communication with other gas control block
  - ⇒ For communication with interface
- ⇒ 3 outputs (PWM) 24 V (blower)
- ⇒ 3 encoder pulse signal inputs (HALL)
- ⇒ 2 or 3 (depending on model) 220 V gas valve activation inputs

NOTE:
The card is supplied with software saved on it. No of version to be saved: 0.5
A label indicates the SAT reference (12046673) and the software version number: 0.5

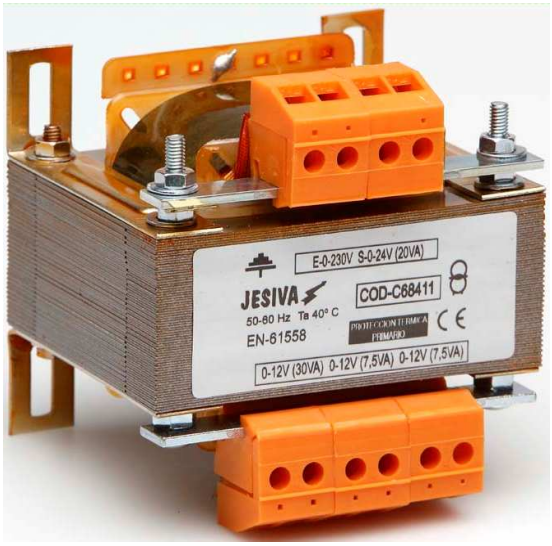




Indicated on label:

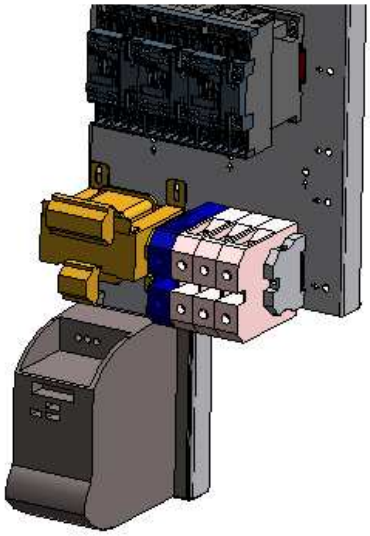
REFERENCE: 12046673
VERSION NO. 0.5

TRANSFORMER - Ref SAP 12024173: (all models)



⇒ AC 0-220/0-12/0-24 Volt transformer

FREQUENCY VARIATOR - Ref SAP 12024329 (all models)

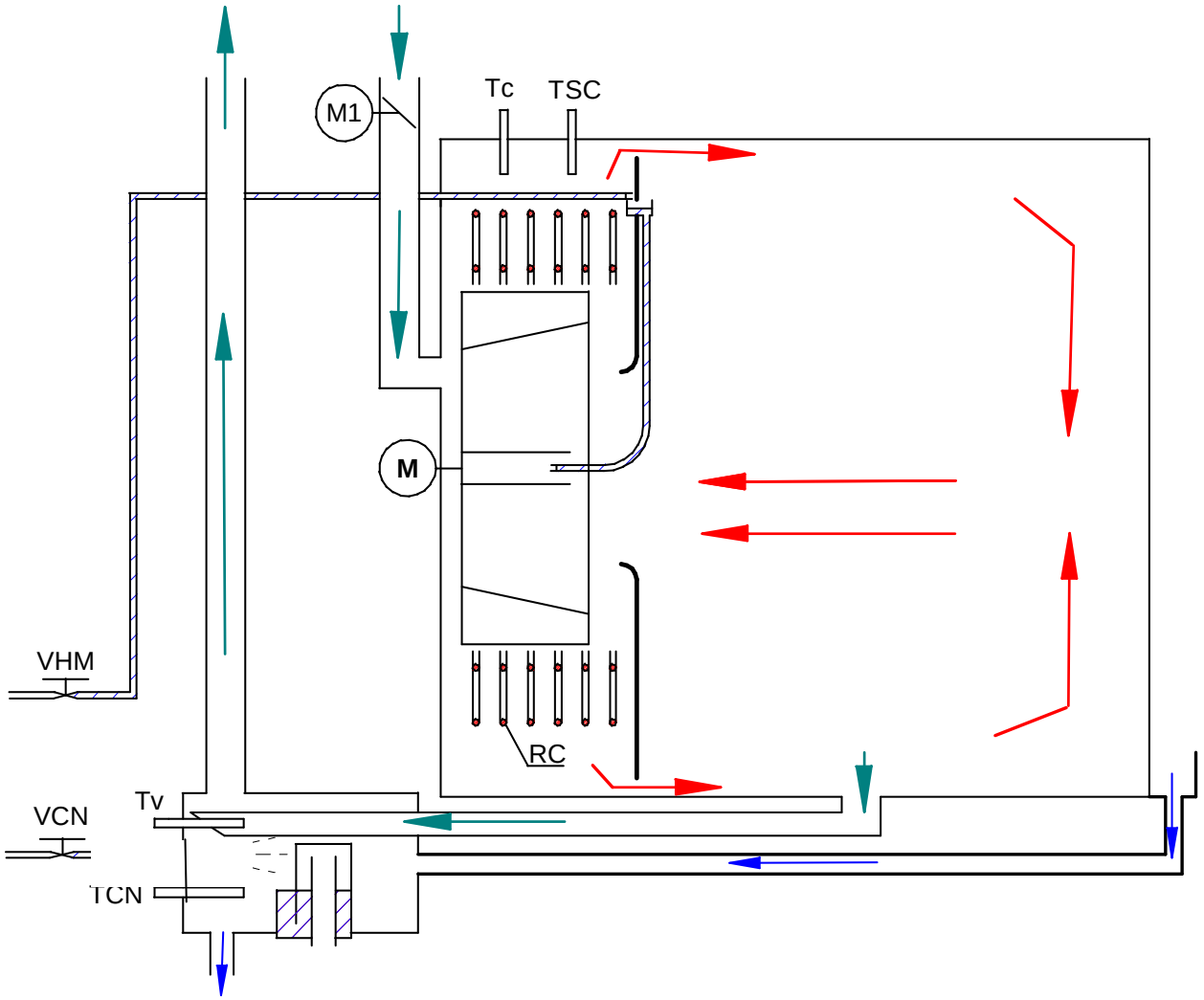


- Freq. Variator 230V AC 1N 50/60 Hz 0.37 KW for chamber turbine motor.

Depending on the model there are two units for the 201 - 202 and one unit for the 061 - 101 - 102.

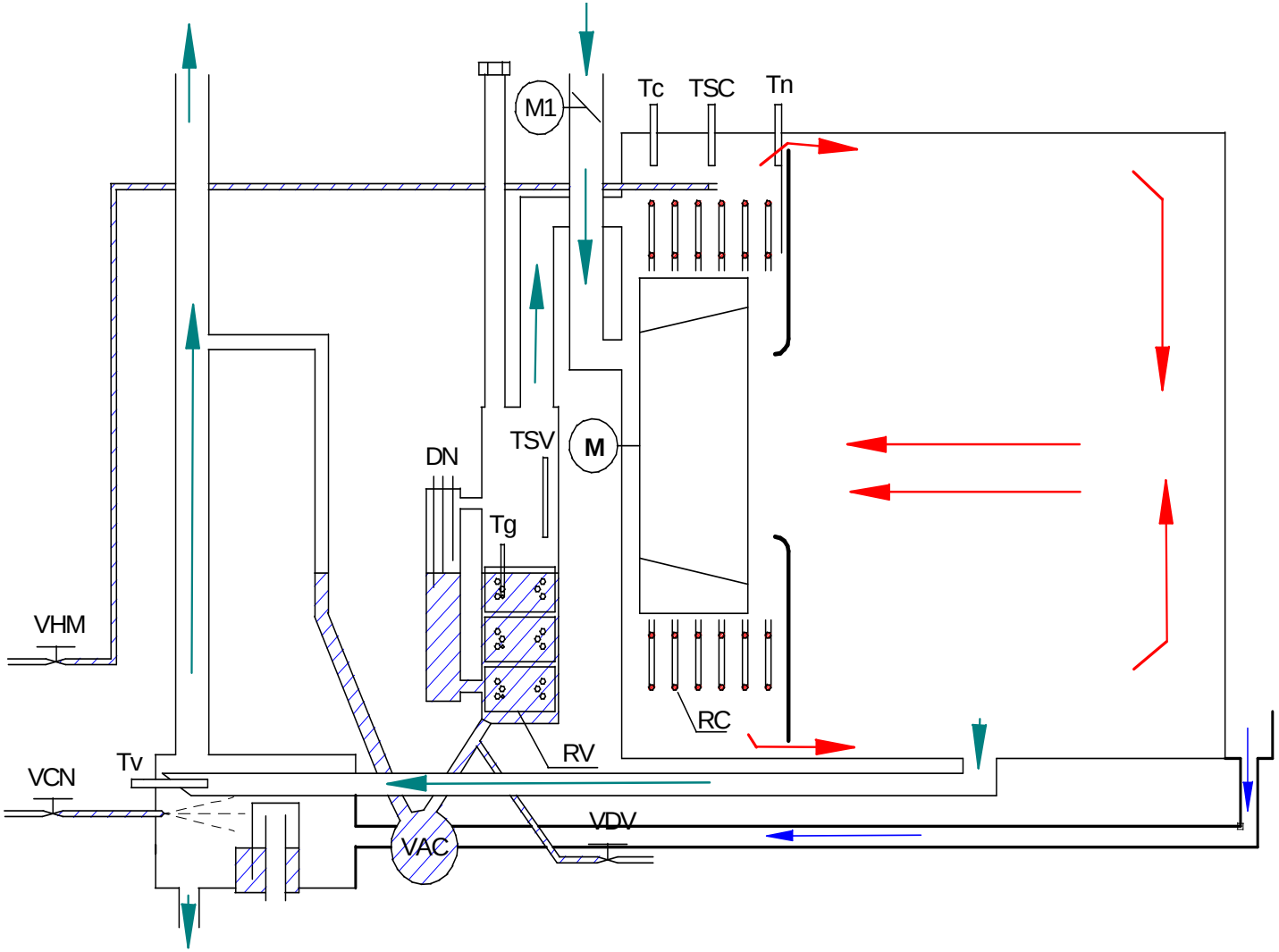
Single-phase input and three-phase output to the motors

ELECTRIC OVEN CIRCUIT DIAGRAMS (ACE)



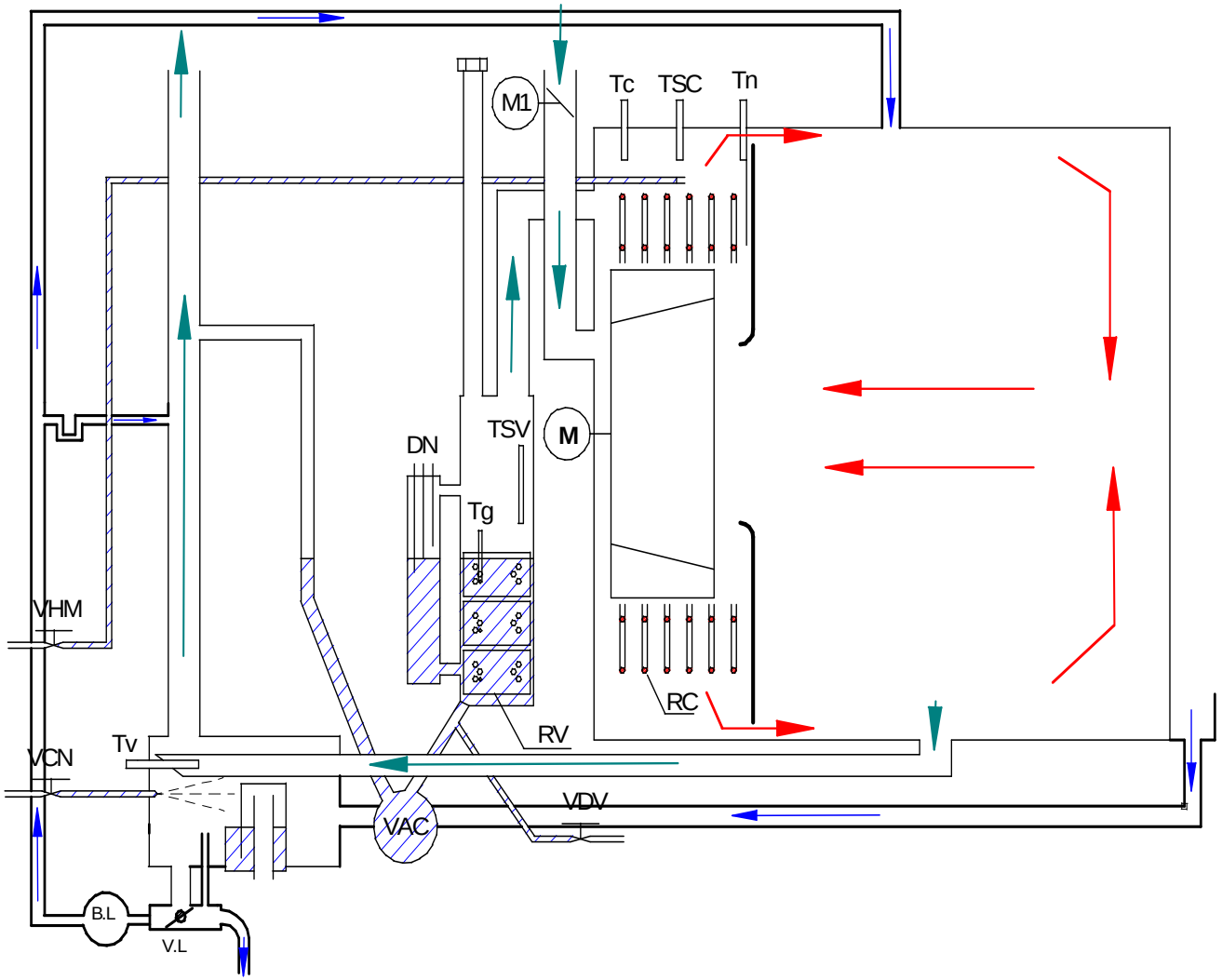
M – Chamber turbine motor
M1 – Chimney Motor
RC – Chamber resistor
Tc – Chamber probe
TSC – Chamber safety thermostat
TV – Steam probe
VCN – Condensation solenoid valve
VHM – Humidifier solenoid valve

ELECTRIC OVEN CIRCUIT DIAGRAMS (AE)



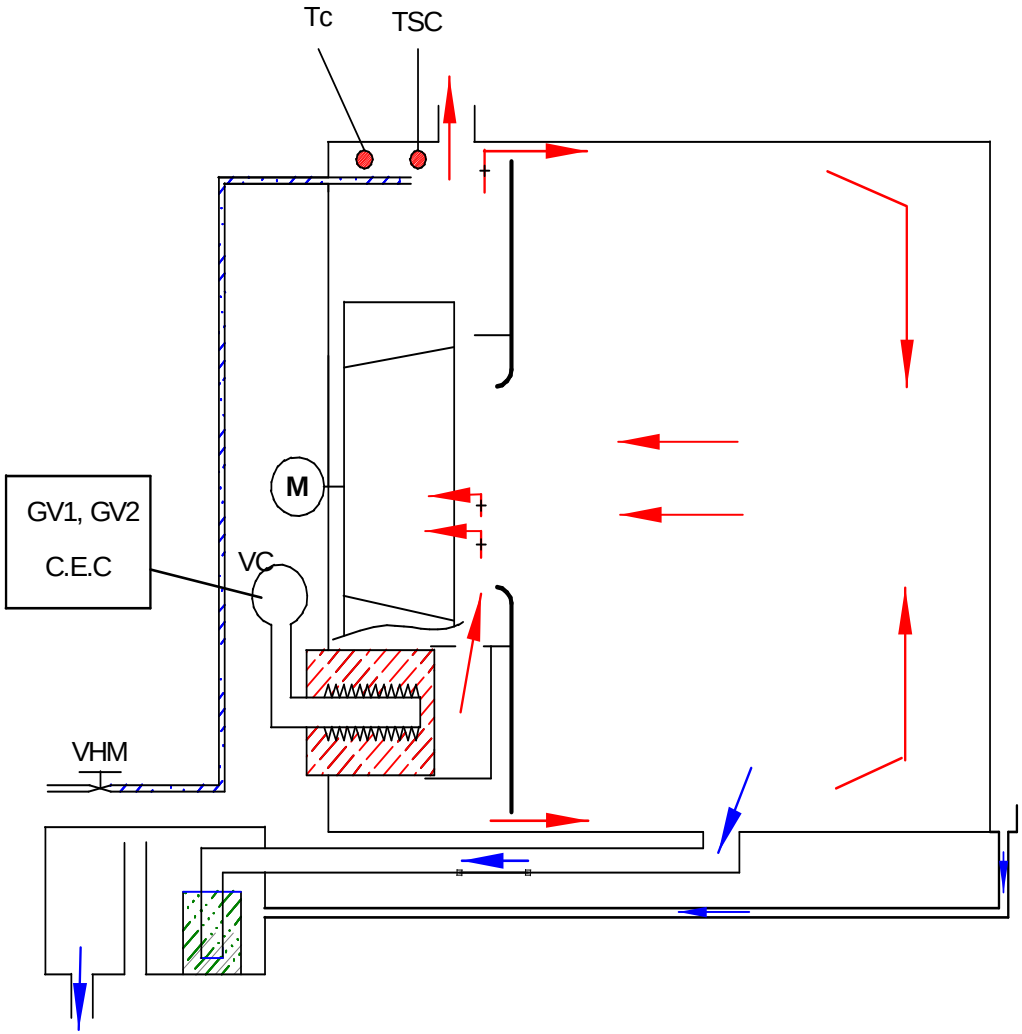
DN – Boiler water level sensors
M – Chamber turbine motor
M1 – Chimney Motor
RC – Chamber resistor
RV – Steam resistor
Tc – Chamber probe
Tg – Boiler probe
Tn – Spike probe
TSC – Chamber safety thermostat
TSV – Boiler safety thermostat
Tv – Steam probe
VAC – Drainage pump
VCN - Condensation solenoid valve
VDV – Boiler fill solenoid valve
VHM – Humidifier solenoid valve

ELECTRIC OVEN CIRCUIT DIAGRAMS (COE)



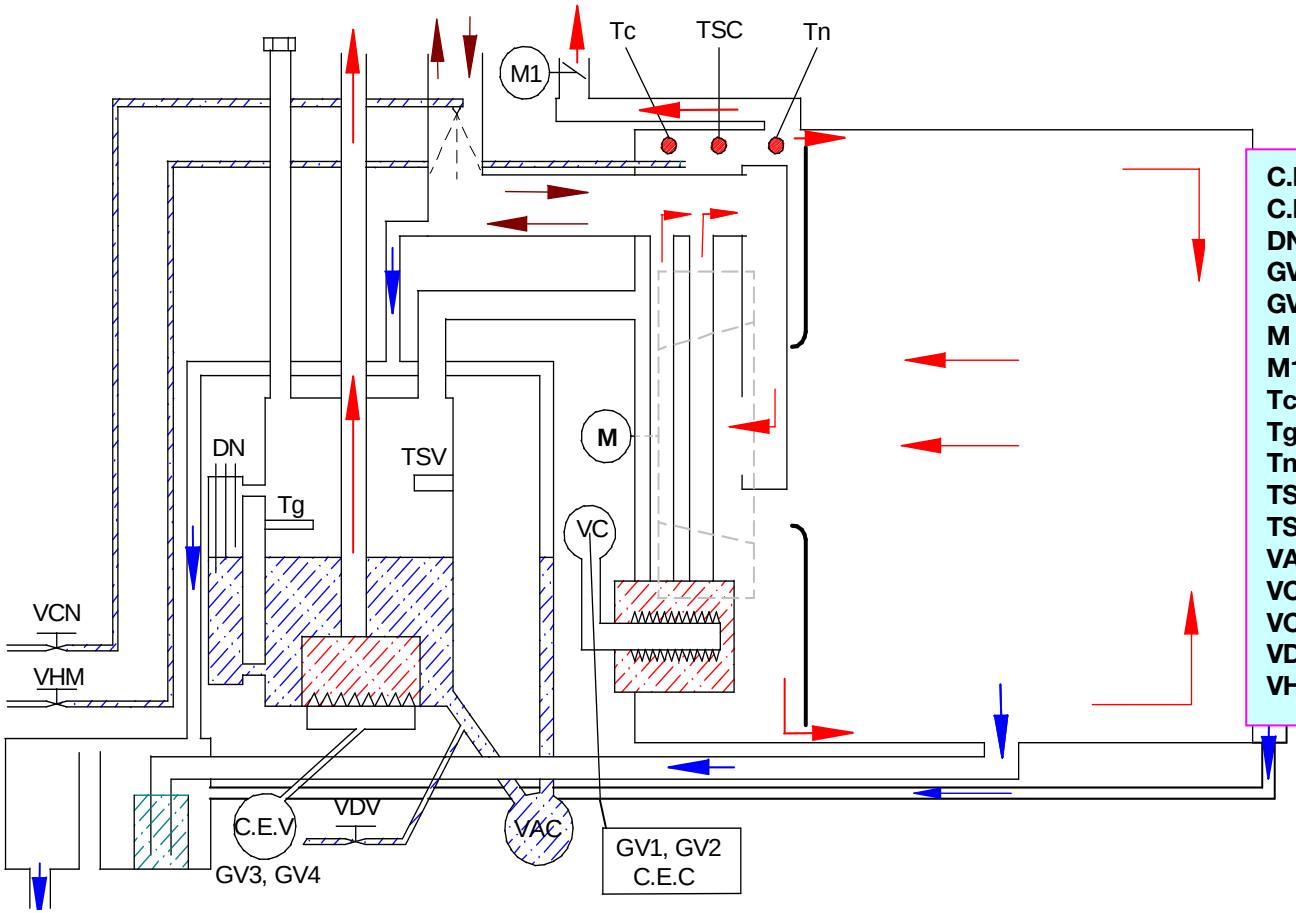
DN – Boiler water level sensors
M – Chamber turbine motor
M1 – Chimney Motor
RC – Chamber resistor
RV – Steam resistor
Tc – Chamber probe
Tg – Boiler probe
Tn – Spike probe
TSC – Chamber safety thermostat
TSV – Boiler safety thermostat
Tv – Steam probe
VAC – Drainage pump
VCN - Condensation solenoid valve
VDV – Boiler fill solenoid valve
VHM – Humidifier solenoid valve
B.L. - Wash pump
V.L. - Wash valve

GAS OVEN CIRCUIT DIAGRAMS (ACG)



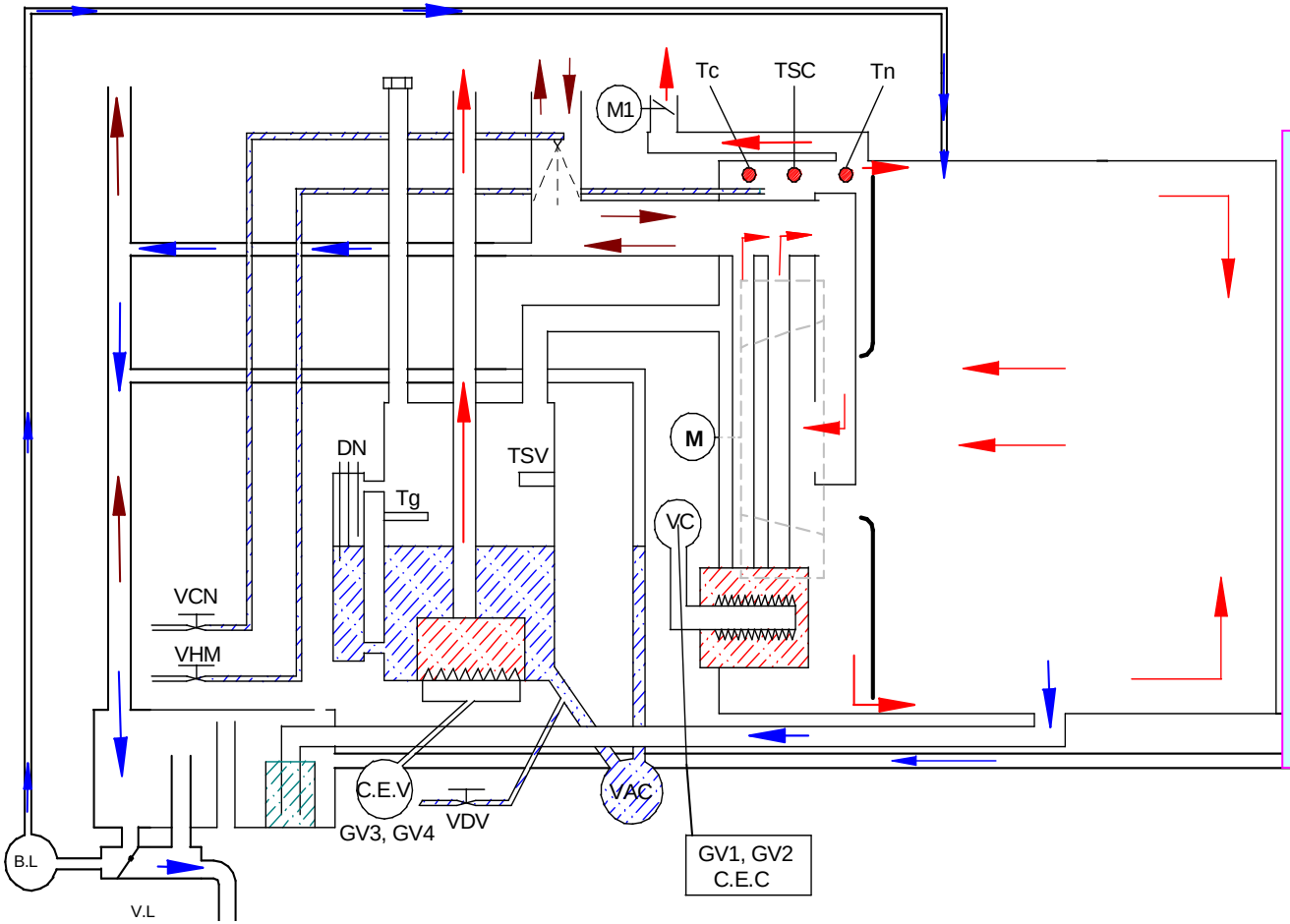
C.E.C. - Chamber combustion control
GV1, GV2 - Gas solenoid valve
M – Chamber turbine motor
Tc - Chamber probe
TSC - Chamber safety thermostat
VC - Blower fan
VHM - Humidifier solenoid valve

GAS OVEN CIRCUIT DIAGRAMS (AG)



C.E.C. - Chamber combustion control
C.E.V. - Boiler combustion control
DN – Boiler water level sensors
GV1, GV2 - Gas solenoid valve
GV3, GV4 – Boiler solenoid valve
M – Chamber turbine motor
M1 – Chimney Motor
Tc - Chamber probe
Tg – Boiler probe
Tn – Spike probe
TSC - Chamber safety thermostat
TSV – Boiler safety thermostat
VAC – Drainage pump
VC - Blower fan
VCN – Condensation solenoid valve
VDV – Boiler fill solenoid valve
VHM - Humidifier solenoid valve

GAS OVEN CIRCUIT DIAGRAMS (COG)



C.E.C. - Chamber combustion control
C.E.V. - Boiler combustion control
DN – Boiler water level sensors
GV1, GV2 - Gas solenoid valve
GV3, GV4 – Boiler solenoid valve
M – Chamber turbine motor
M1 – Chimney Motor
Tc - Chamber probe
Tg – Boiler probe
Tn – Spike probe
TSC - Chamber safety thermostat
TSV – Boiler safety thermostat
VAC – Drainage pump
VC - Blower fan
VCN – Condensation solenoid valve
VDV – Boiler fill solenoid valve
VHM - Humidifier solenoid valve
B.L. - Wash pump
V.L. - Wash valve

FAGOR INDUSTRIAL

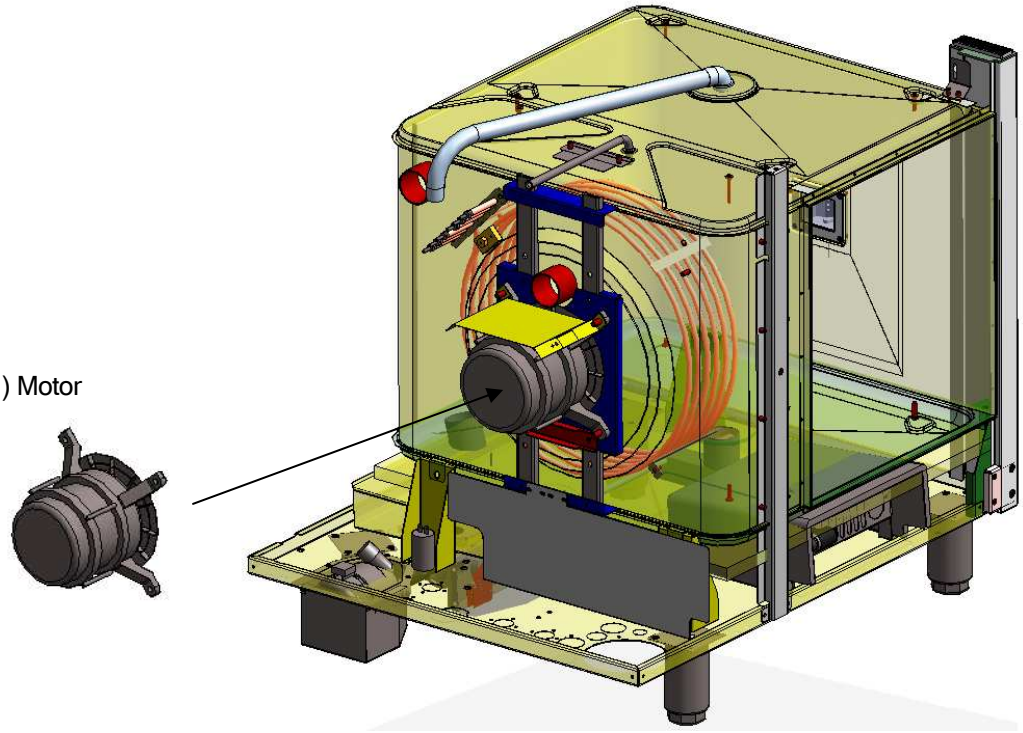
MOTORS AND TURBINES

MODEL	MOTOR	TURBINE
061	12024358 (12024325)(X 1)	12024789 (12024306) D350 (X 1)- ELECTRICO 12024786 (X 1) D280 - GAS
101	12024358 (12024325)(X 1)	12024789 (12024306) D350 (X 1)
102	12024358 (12024325)(X 1)	12024789 (12024306) D350 (X 1)
201	12024358 (12024325)(X 2)	12024789 (12024306) D350 (X 2)
202	12024358 (12024325)(X 2)	12024789 (12024306) D350 (X 2

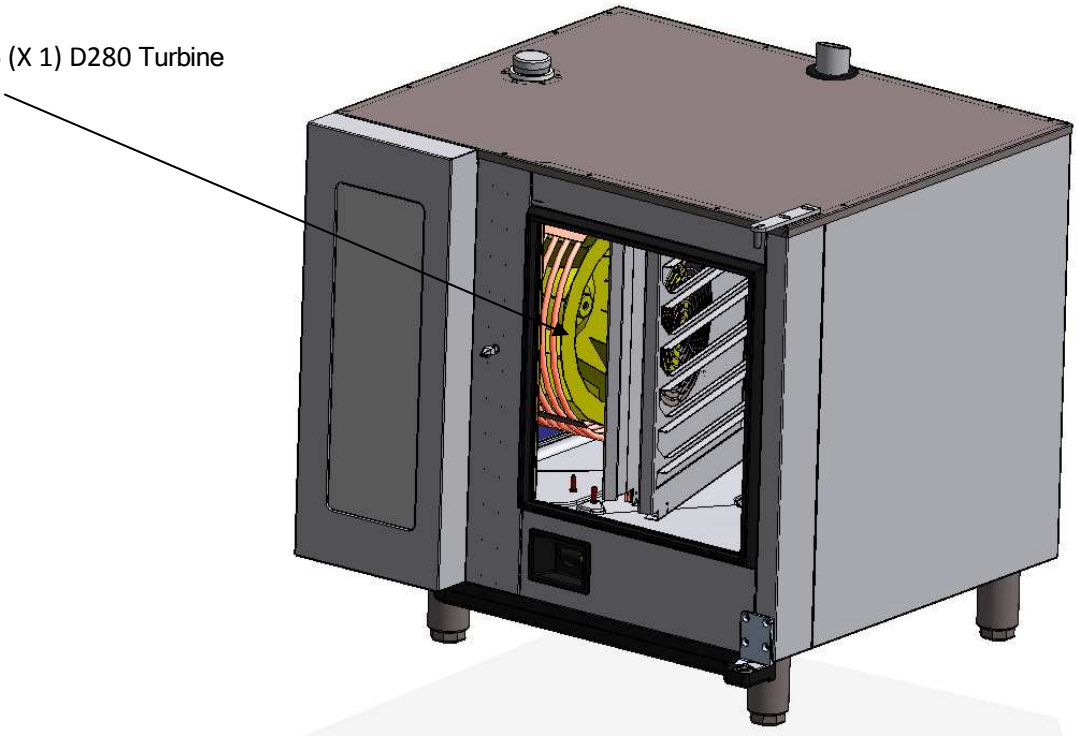
Details are attached of the motors and turbines for the 061 families (Smaller diameter turbine), 101-102 & 201 -202.

061 OVENS

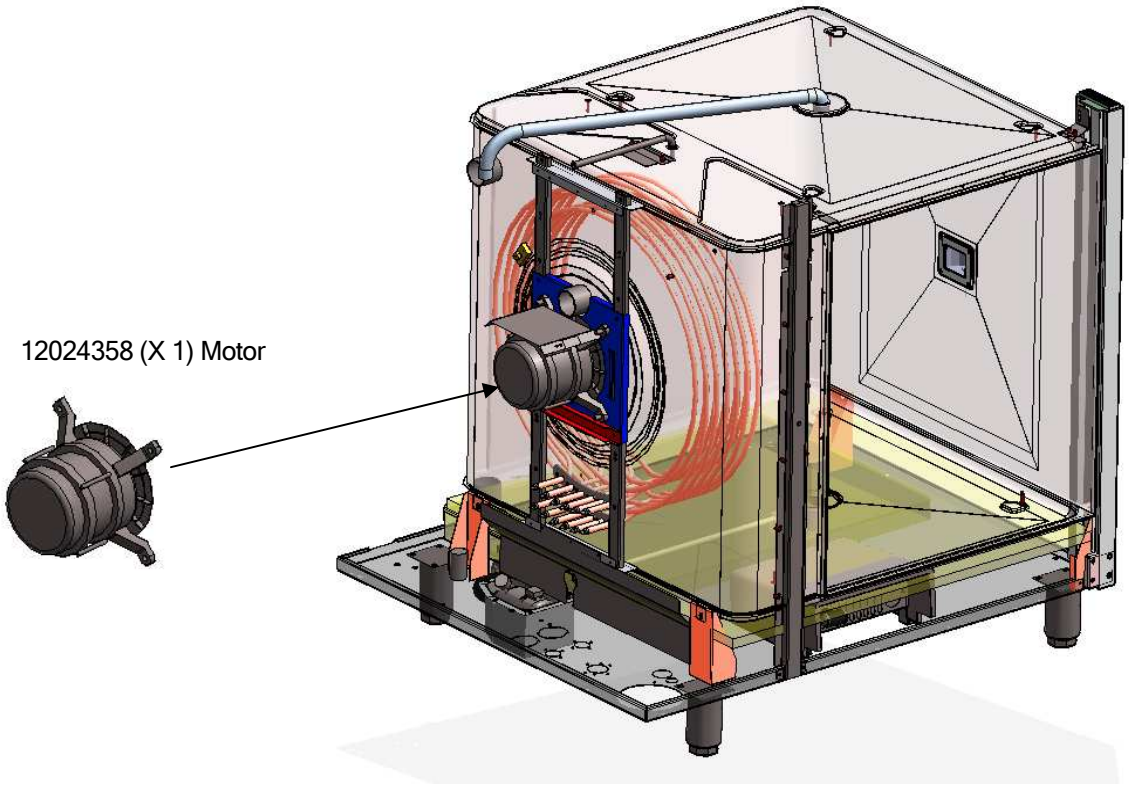
12024358 (X 1) Motor



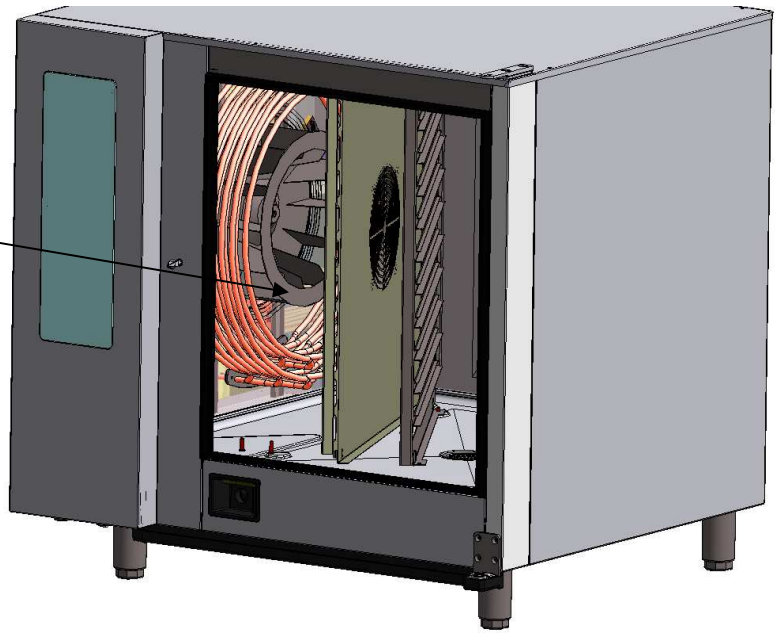
12024786 (X 1) D280 Turbine



12024358 (X 1) Motor

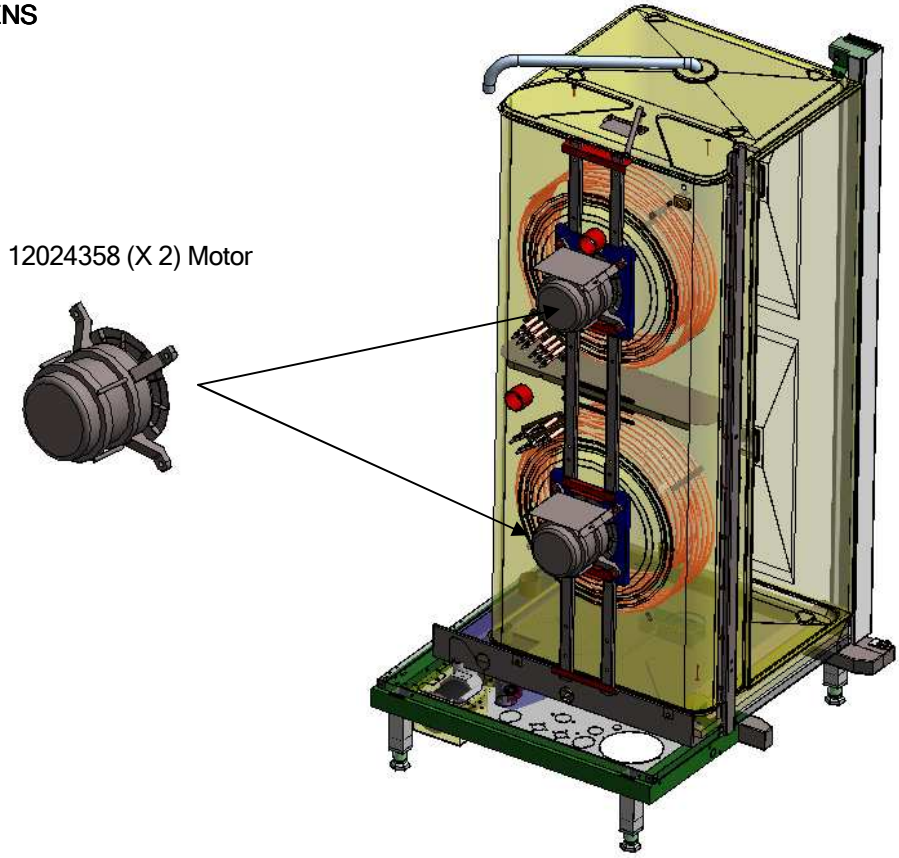


12024306 D350 (X 1) Turbine



NOTE: For this family of OVENS, the motors are the same as for the 061, but the turbine is larger (d: 350) than that of the 061 (d: 280). This due to the internal volume of the chamber. As this is larger it needs a larger turbine.

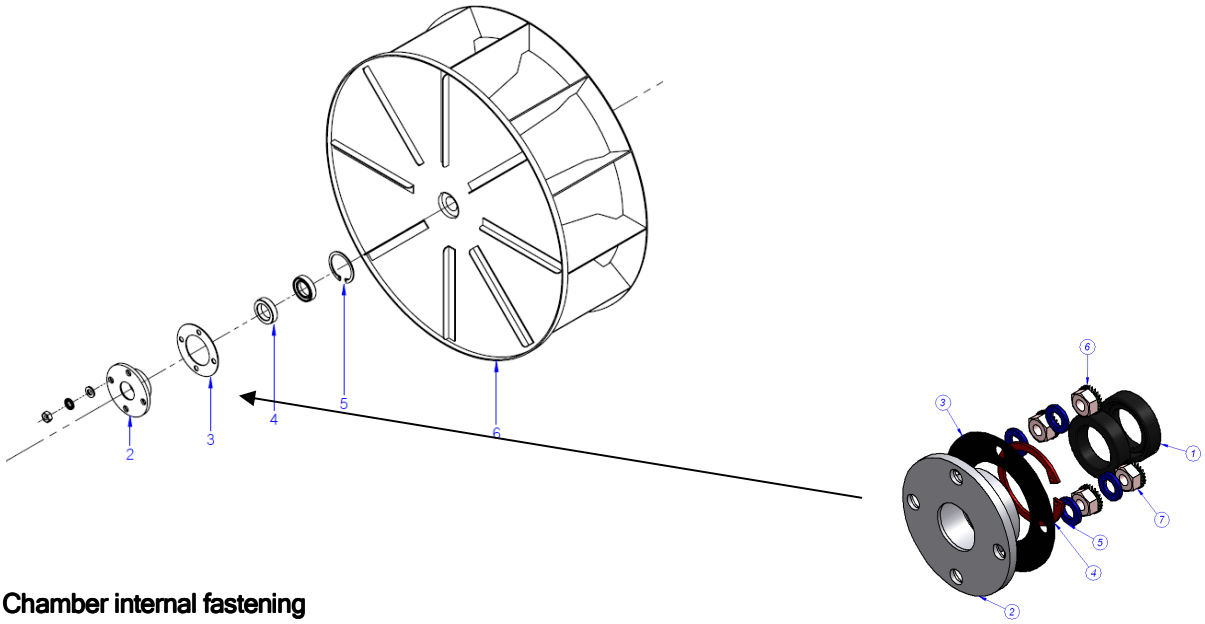
12024358 (X 2) Motor



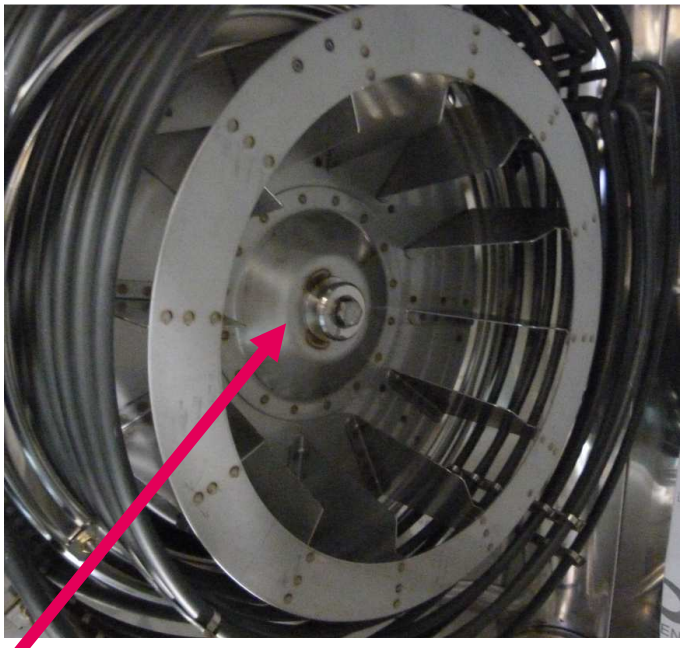
12024306 (X 2) Turbine

Details are attached of the TURBINE fastenings

Chamber turbine fastening



Chamber internal fastening



Nut

NOTE: At present we have two references for motors with their turbines. This is due to the fact that we work with two different suppliers. **They are totally interchangeable.**

Example: **Motor** Prov. 1 ----- Prov. 2 **Turbina** Prov. 1 ----- Prov. 2

12024358 (12024325)(X 1)	12024789 (12024306) D350 (X 1)

FAGOR

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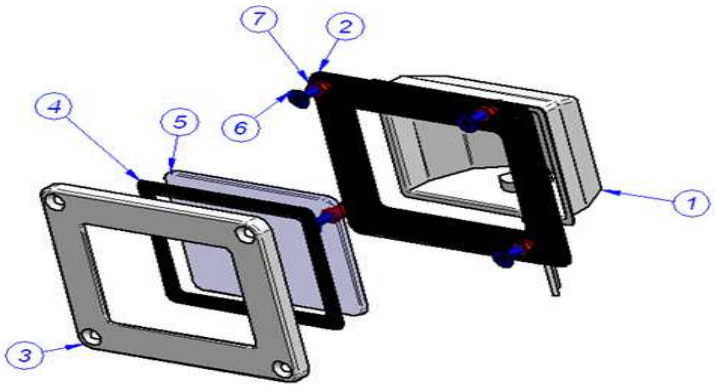
ASSEMBLY OF VARIOUS COMPONENTS CHAMBER- STEAM GENERATOR - CONDENSATION CHAMBER

Details are attached for the assembly and components of various elements located in the **INTERNAL BODY** (CHAMBER), **STEAM GENERATOR** & **CONDENSATION CHAMBER.**

CHAMBER LIGHT



7	HEXAGONAL RIVET M4 (INOX)	4	12010002
6	CSUNK. BOLT M4X15	4	12010262
5	LAMP GLASS	1	12023668
4	LAMP INTERIOR SEAL	1	12023532
3	LAMP FRAME	1	12024464
2	LAMP EXTERIOR SEAL	1	12023578
1	LAMP HOLDER	1	12024545

PROBES

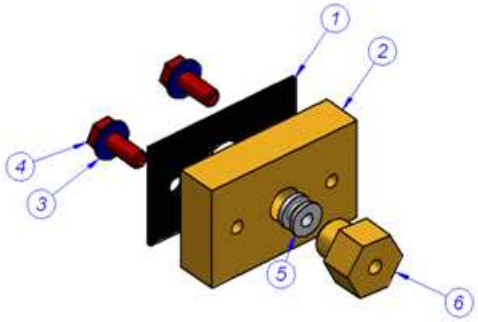
Here, we aim to portray the location as the appropriate assembly distance for the various thermostats mounted in the ovens.

Types of TEMP. PROBE:

1.- CHAMBER temperature probe (TC) **TYPE " K " VALUE 5-11 Ohm**
2.- STEAM GENERATOR temperature probe (TG) **TYPE " K " VALUE 5-11 Ohm**
3.- STEAM temperature probe (from the drainage box) **TYPE " K " VALUE 5-11 Ohm**
4.- CORE probe (SPIKE) MULTI-TIP for all models in the series

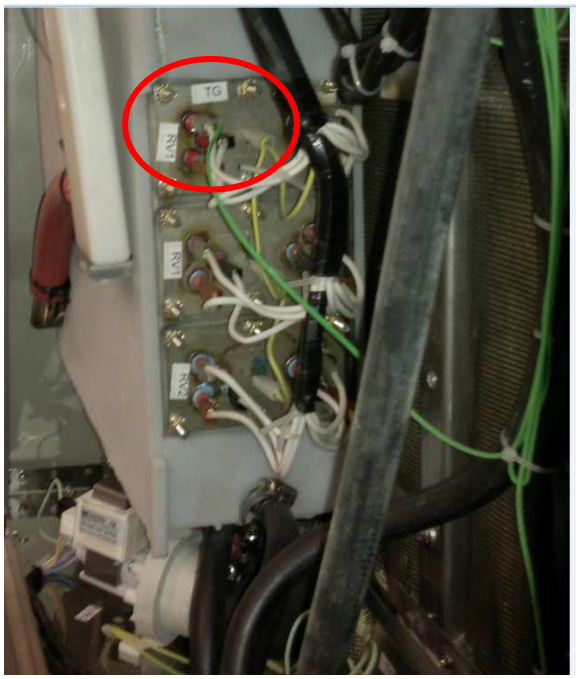
1.- CHAMBER Probe, It is ESSENTIAL and important to check the distance between the end of the CHAMBER probe and the end of the probe closing adaptor. (**25 mm**)

Ref Sap CHAMBER THERMOCOUPLE: 12024642



6	PROBE CLOSING CONNECTION	1	12023581
5	PROBE CLOSING BICONE	1	12024247
4	HEX. BOLT M4X10	2	12010249
3	WASHER A-4	2	12009987
2	PROBE LOCK BASE	1	12023737
1	SIMPLE FEEDTHROUGH SEAL	1	120235504

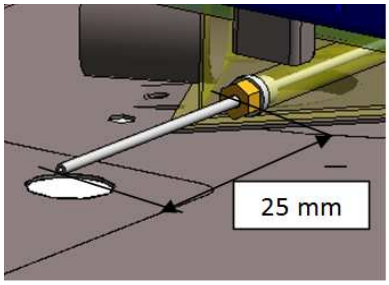
2.- Temperature **Probe STEAM GENERATOR**. See location on attached figure:



3.- STEAM temperature probe

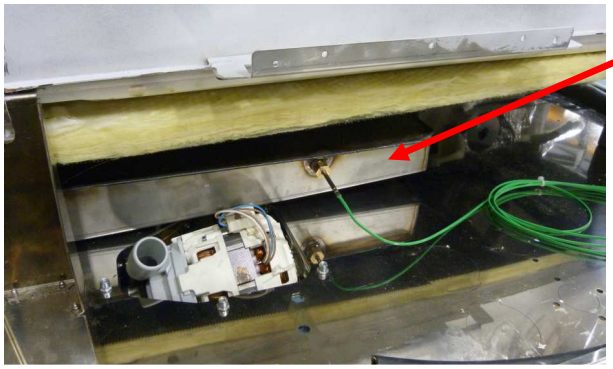
This probe is located in the **DRAINAGE BOX**. The assembly distances vary considerably with the model. Please see attached table:

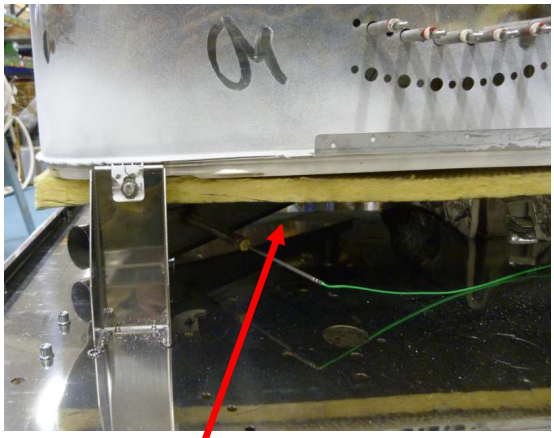
	SAP reference	Distance to bushing
11 061 -101	12041634	125 mm
ADVANCE PLUS 061-101	12044609	25 mm
CONCEPT-ADVANCE 102	12041634	120 mm
ADVANCE PLUS 102	12039678	35 mm
CONCEPT-ADVANCE 202	12039678	50 mm
ADVANCE PLUS 202	12039678	10 mm
ADVANCE PLUS 201	12044609	25 mm
CONCEPT-ADVANCE 201	12041634	25 mm

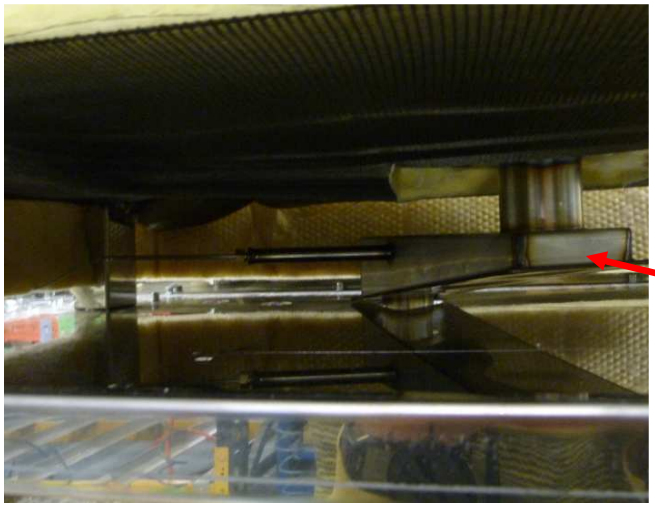


Photos different locations for **STEAM PROBES**:

APG - APE (WITH WASH PUMP)





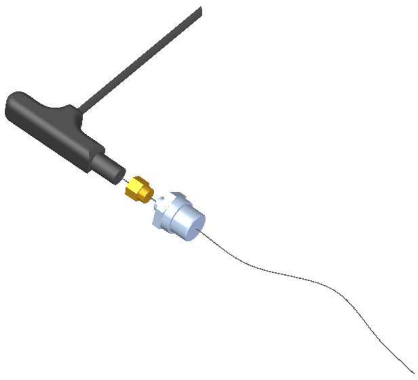


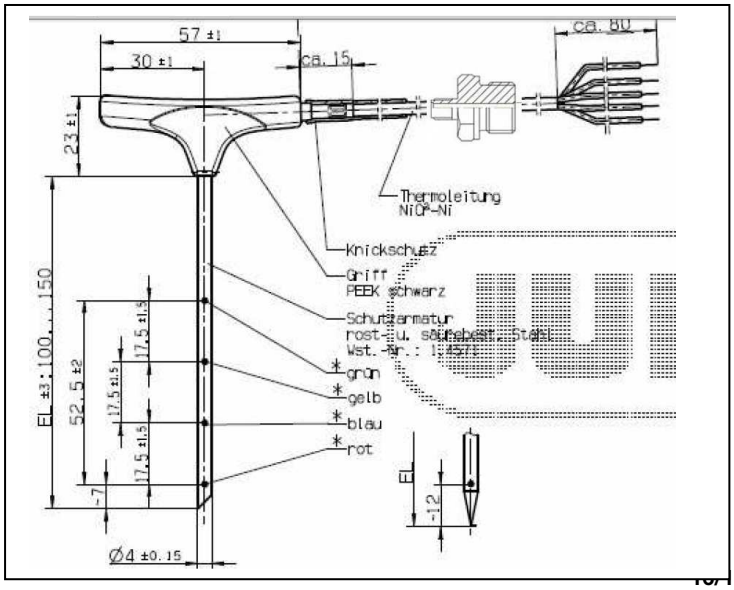
ACG - AG (WITHOUT WASH PUMP)
ACE - AE (WITHOUT WASH PUMP)

4.- MULTI-TIP CORE PROBE.

This probe is used to measure the temperature of the interior of the food and therefore take more exact measurements, in all the **ADVANCE RANGE MULTI-TIP PROBES (4 tips) type " K" 50 ohm** are used.

Ref SAP : 12039548

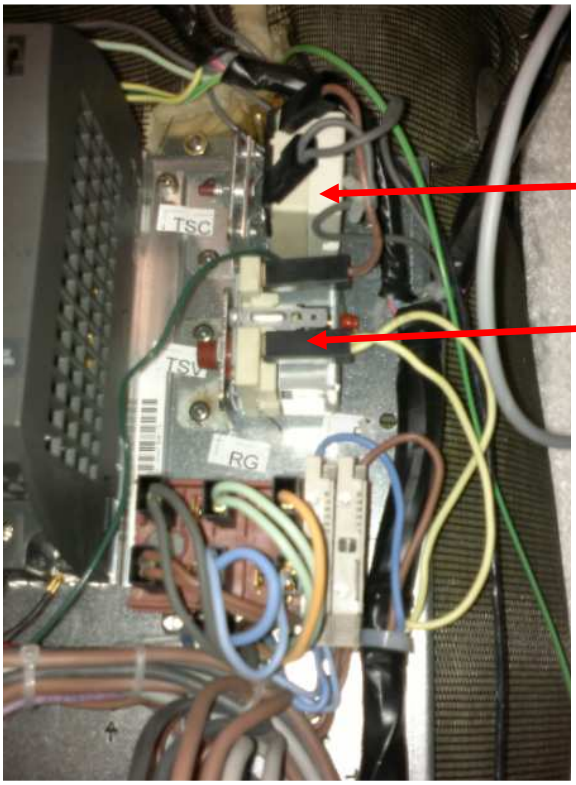




SAFETY THERMOSTATS:

In addition to these TEMPERATURE PROBES, for safety reasons there are another two SAFETY THERMOSTATS, which come into operation at certain critical values, and can be reset manually:

1.- CHAMBER SAFETY thermostat **(TSC)**
2.- STEAM GENERATOR safety thermostat **(TSV)**



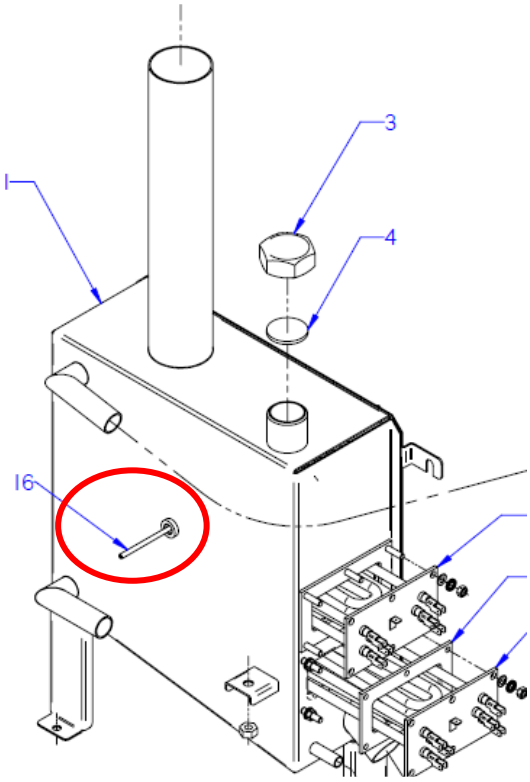
1.- TSC (SAP CODE: 12024591)

Disconnection temp.: 360 ºC, 18 K

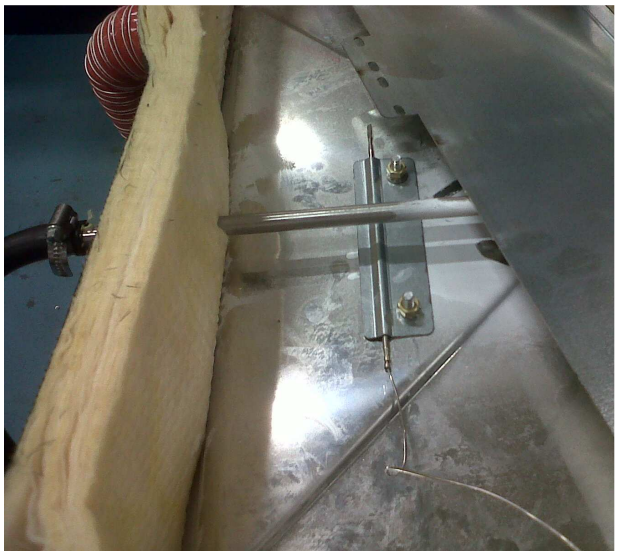
2.- TSV (SAP CODE: 12024884)

Item No 16 attached photo

Disconnection temp. 150 ºC , 6 K



TSC: In the upper external area of the chamber (see photo)



HEATING SYSTEM IN CONVECTION MODE (dry heat)

The heating for the CONVECTION mode uses electrical resistors in the electric model and gas burners in the GAS model.

HEATING SYSTEM FOR ELECTRIC OVENS

This section indicates the electric resistors used by the RANGE of oven FAMILIES. Attached as follows:

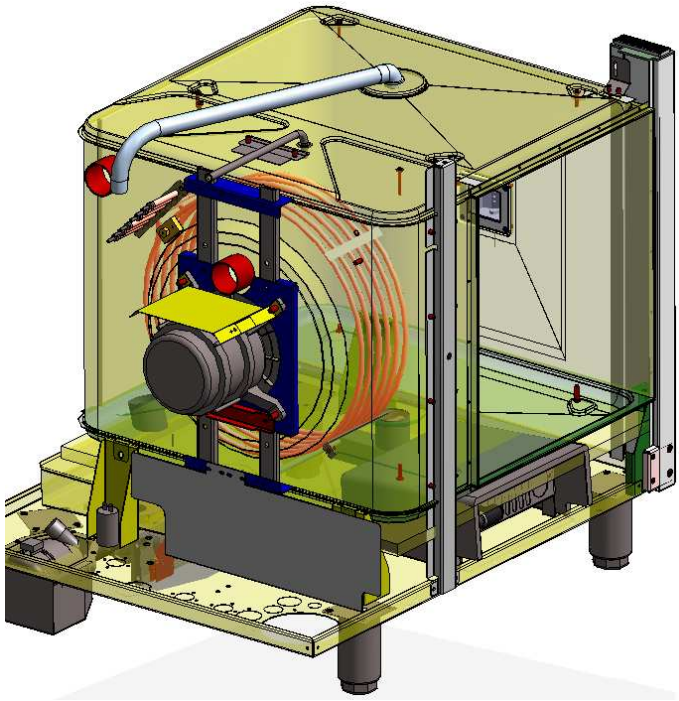
MODEL	RESISTORS	SAP CODE	TOTAL POWER
061	9KW INT	12039496	9 KW
101	9KW INT 9 KW EXT	12039496 12039497	18 KW
102	3X5 KW INT 3X5 KW EXT	12024349 12024359	30 KW
201	2 x (9 KW INT) 2 X (9 KW EXT)	2 x (12039496) 2 X (12039497)	36 KW
202	3X5 KW INT 3X5 KW EXT	2 x (12024349) 2 X (12024359)	60 KW

SIZES 061,101 & 102:

061: 12039496

101 12039496 + 12039497

102 12024349 + 12024359



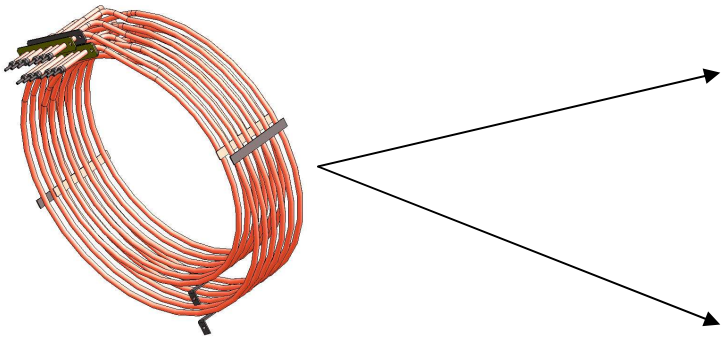
SIZES 201 & 202 :

201

2 x (12039496)
2 X (12039497)

202

2 x (12024349)
2 X (12024359)



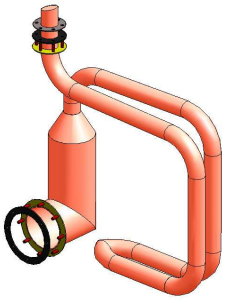
HEATING SYSTEM FOR GAS OVENS

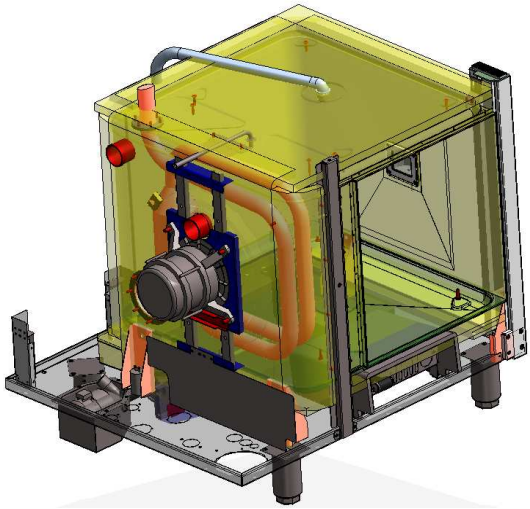
This section indicates which of the heat exchangers are used by RANGE of oven FAMILIES and describes the gas burner. Attached as follows:

MODEL	HEAT EXCHANGERS	SAP CODE
ACG/AG/APG 061	PLEASE SEE ATTACHED PLAN	12039650
ACG/AG/APG 101	PLEASE SEE ATTACHED PLAN	12039552
ACG/AG/APG 102	PLEASE SEE ATTACHED PLAN	12039441
ACG/AG/APG 201	PLEASE SEE ATTACHED PLAN	12039473 UPPER 12040734 LOWER
ACG/AG/APG 202	PLEASE SEE ATTACHED PLAN	12039395 UPPER 12039397 LOWER

HEAT EXCHANGER FOR ACG/AG/APG OVEN 061:

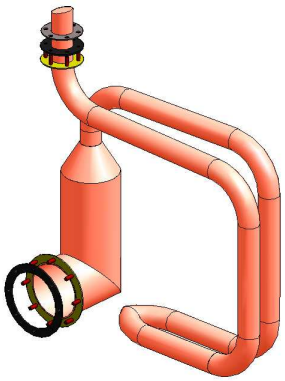
SAP CODE: 12039650

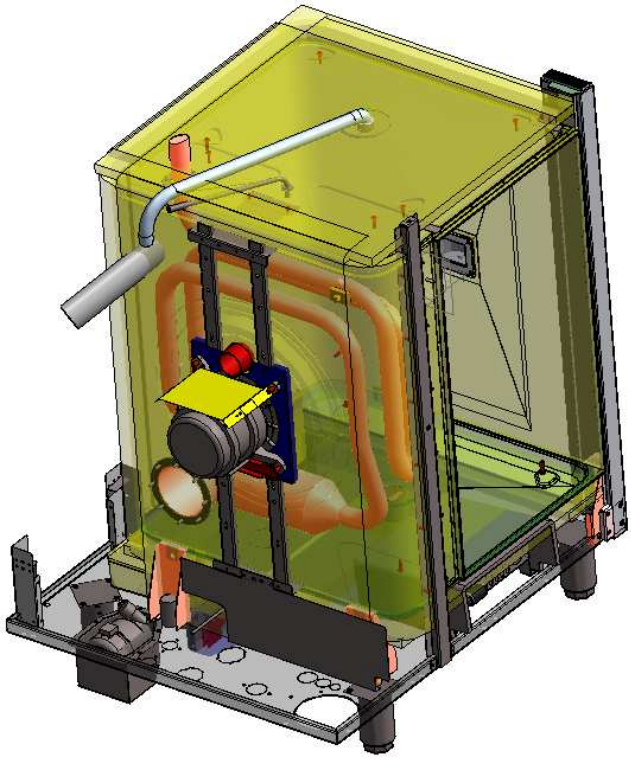




HEAT EXCHANGER FOR ACG/AG/APG OVEN 101:

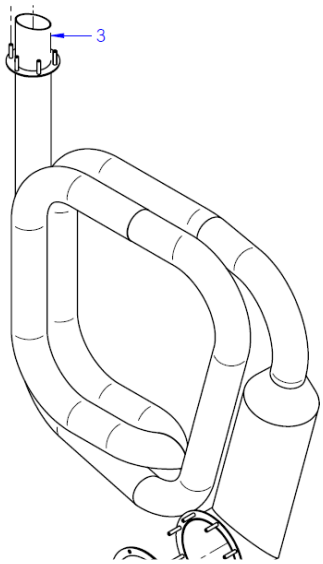
SAP CODE: 12039552

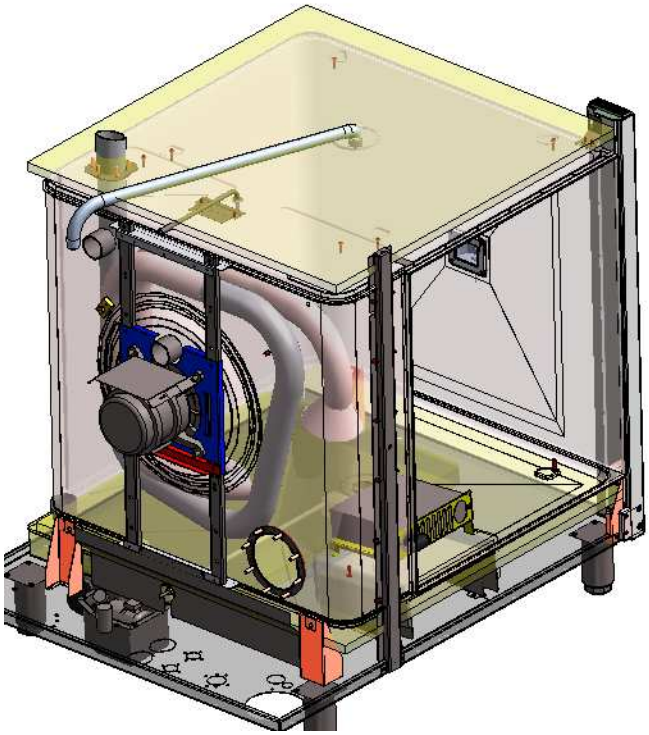




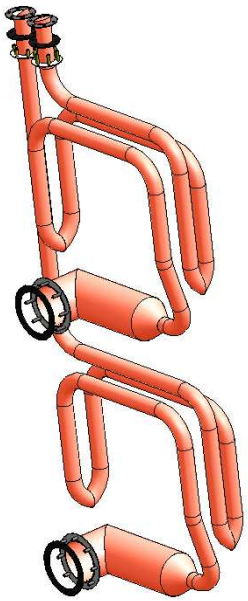
HEAT EXCHANGER FOR ACG/AG/APG OVEN 102:

SAP CODE: 12039441



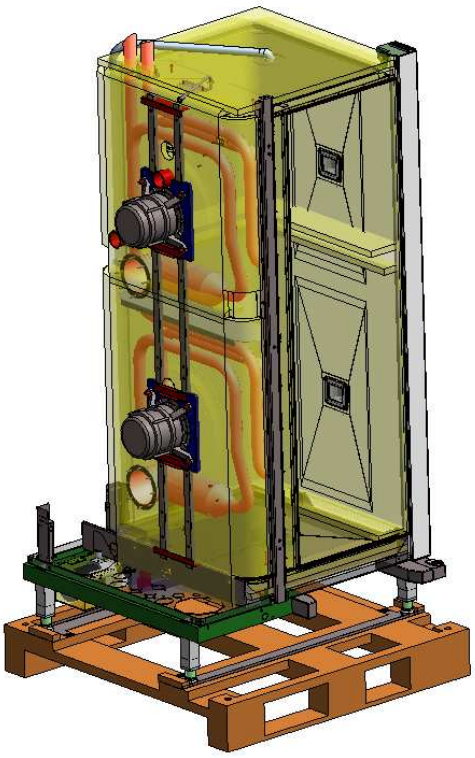


HEAT EXCHANGER FOR ACG/AG/APG OVEN 201:

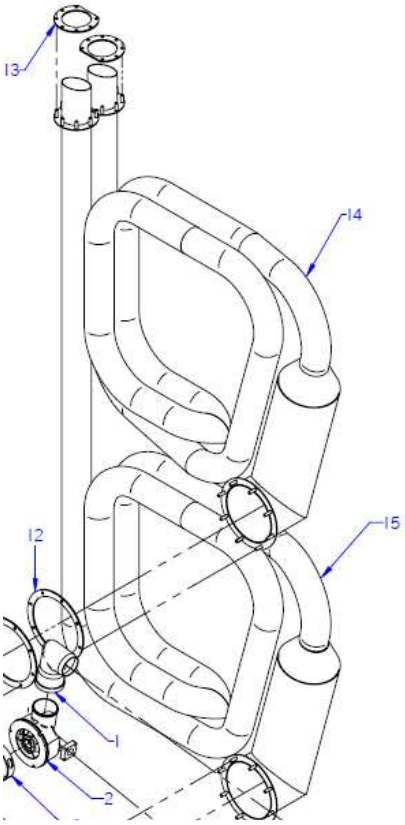


201: 12039473 UPPER

201: 12040734 LOWER



HEAT EXCHANGER FOR ACG/AG/APG OVEN 202:



202: 12039395 UPPER

202: 12039397 LOWER

NOTE: Note that the position of the burners is different in all the GAS models, and this means that the position of the blowers, mixer, ignition control, spark plug, flame detector, etc. are also different.

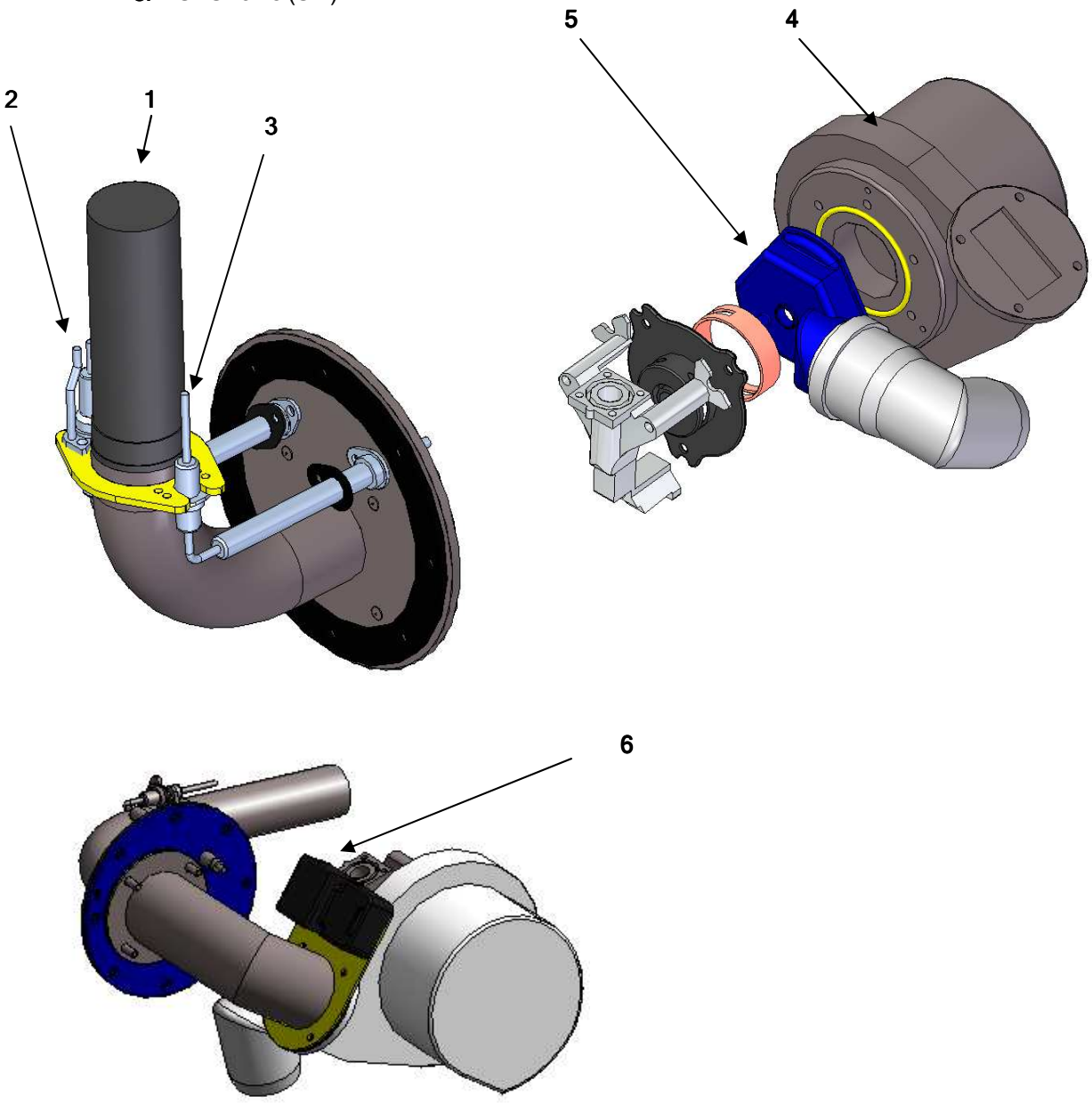
CONVECTION GAS BURNER:

This section aims to describe the most important components involved in the process to heat the chamber in **CONVECTION** mode.

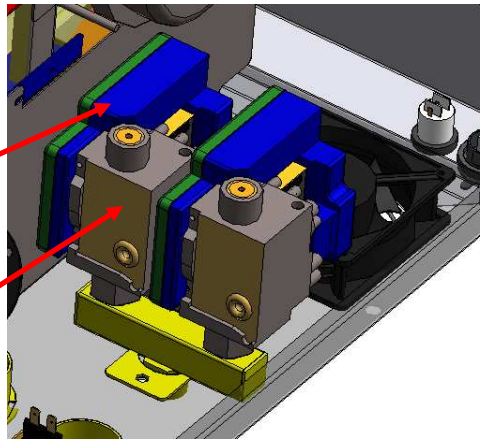
In all the **ACG/AG/APG 061-101-102-201 & 202** models of oven, the components are the same. The only difference is that the layouts are different depending on the layout of the model of heat exchanger (See previous section)

These are the elements to be considered:

1. Gas burner
2. Convection spark plug (new system in comparison with the VISUAL RANGE)
3. Flame detector
4. Blower
5. Mixer
6. High frequency spark generator
7. Ignition control
8. GAS valve (SIT)



7.- Ignition control: Depending on the number of burners, the number of ignition controls also varies.



For example:

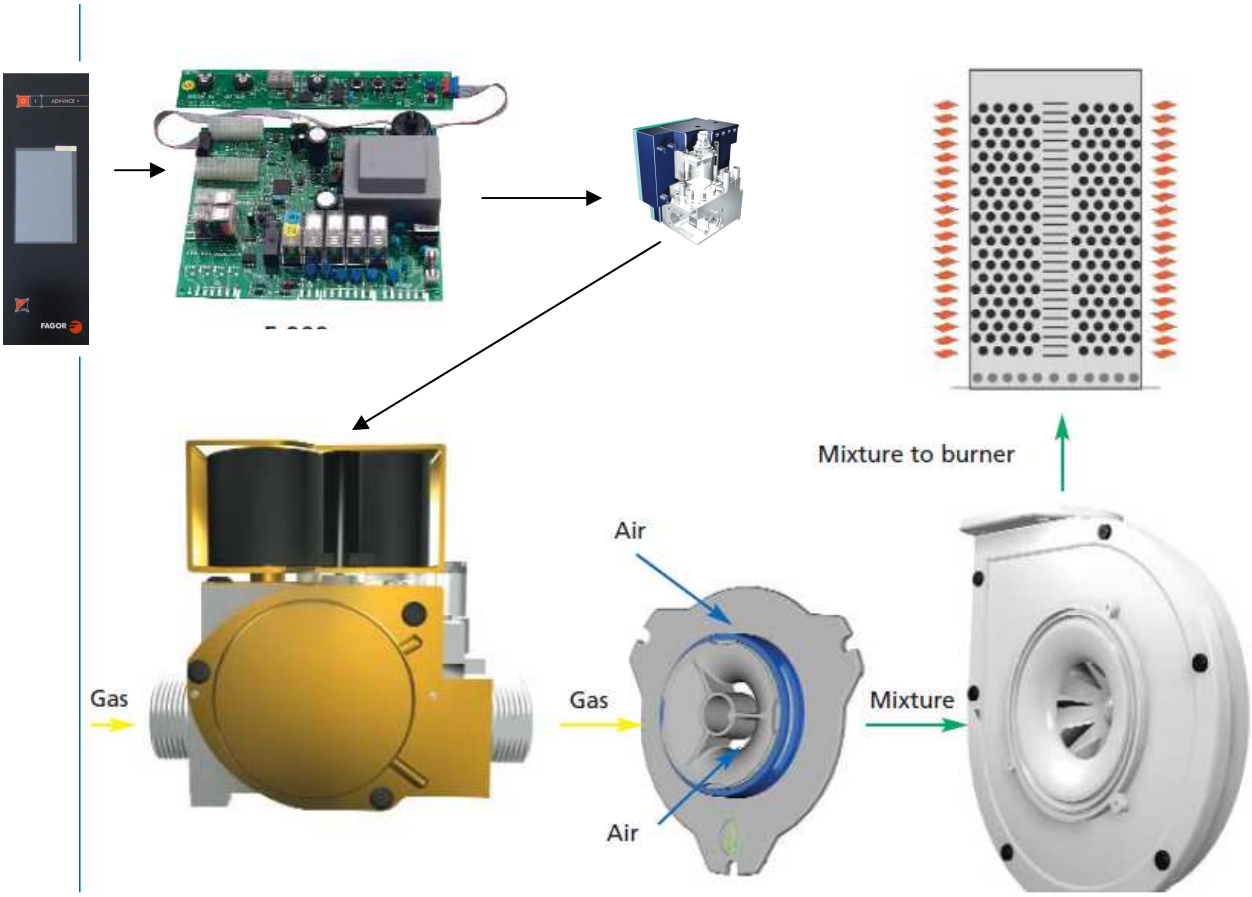
061: CONVECTION ignition control (X 1)
101 : CONVECTION ignition control (X1)
102 : CONVECTION ignition control (X1)
201 : CONVECTION ignition control (X2)
202 : CONVECTION ignition control (X2)

Similarly for the **GAS valves**

8.- GAS valve (SIT) (Specifically for 50 Hz or for 60 Hz)

GAS PATHWAY

This small diagram shows the GAS pathway with details of where the GAS and AIR mixture takes place.



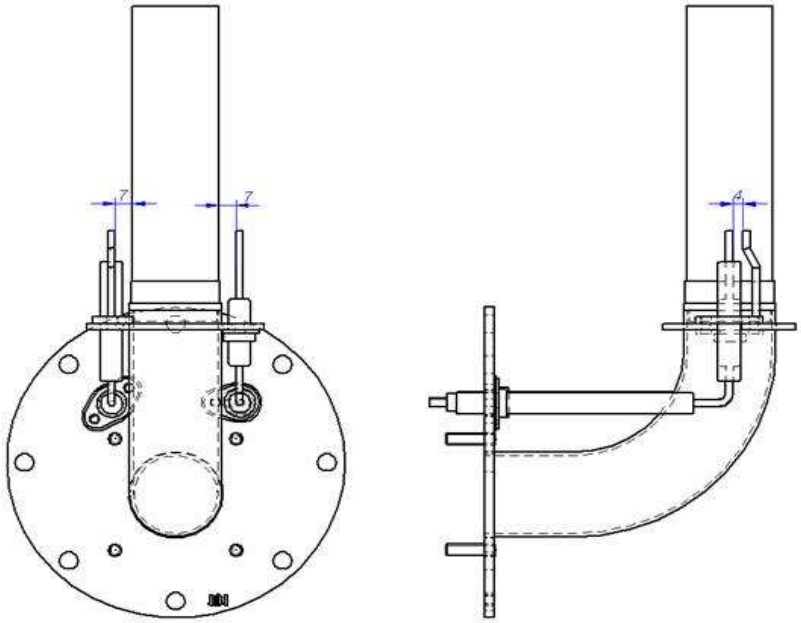
As soon as the **CHAMBER CARD** detects, via the **CHAMBER TEMPERATURE PROBE** that the temperature inside the CHAMBER, pre-established by the user, has not been reached, the chamber card sends a signal to the **GAS CARD**, which in turn acts on the **GAS VALVE**. This allows the GAS to pass to the **MIXER/BLOWER** unit where the correct GAS - AIR mixture takes place, as required for perfect combustion in the burner thanks to the spark generated by the **SPARK PLUG**.

1,2 & 3.- GAS BURNER - SPARK PLUG - FLAME DETECTOR

In the new **ADVANCE** oven, the spark is generated (by a spark generator **Ref. SAP 12039544 for all the GAS RANGE**) between the spark plug and a rod which acts as an **EARTH** (See attached figure)

To ensure correct operation and to avoid minor "explosions" due to incorrect ignitions, and the locking of the system, it is essential to check the following measures are taken:

- Distance between flame detector - burner " A " – **7 mm**
- Distance between spark plug – earth " B " – **4 mm**
- Distance between spark plug – burner " C " – **7 mm**



BURNER POWERS AND SAP REFERENCES:

CONVECTION burner (BUTANE PROPANE)

MODEL	SAP CODE	TOTAL POWER
61	12039680	12 KW
101	12039556	18 KW
102	12039442	35 KW
201	12039556 X 2	36 KW
202	12039442 X 2	65 KW

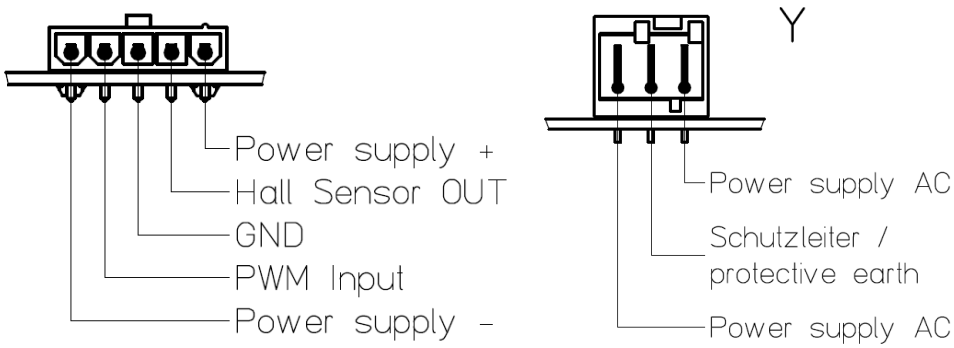
STEAM GENERATOR burner (BUTANE PROPANE)

MODEL	SAP CODE	TOTAL POWER
61	12039583	12 KW
101	12039583	18 KW
102	12044278	30 KW
201	12044424	30 KW
202	12039427	45 KW

4.- BLOWER

Two types of blower made by EBMPAPST are used.

1. **Blower NRG 118 55 kw** (CONVECTION burner all models + STEAM GENERATOR burner except model 202) **Ref SAP: 12044607.**



Maniobra **Potencia**

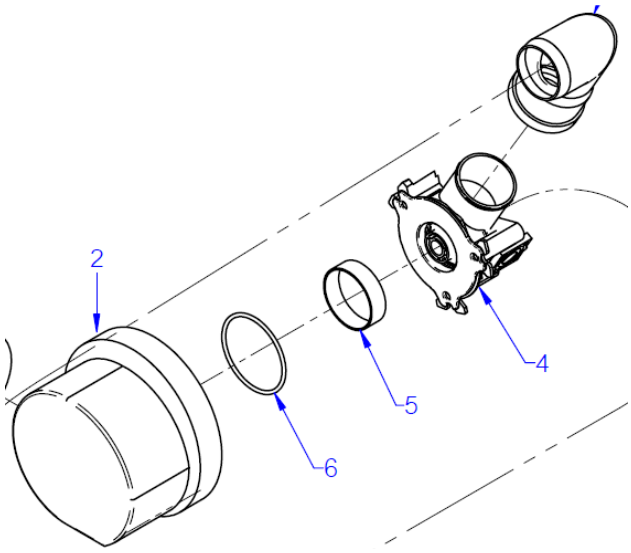
- Power supply: 24 V DC
- PWD setting: 24 V DC, 256 steps
- Speed reading < 10000 rpm

2. **Blower RG 148** (Only for the STEAM GENERATOR 202 burner**12039373**

- Power supply: 24 V DC
- PWD setting: 24 V DC, 256 steps
- Speed reading < 10000 rpm

5.- MIXER

This mixer is designed to maximise the use of ambient air thanks to its AXIAL and LATERAL inlets.



Between the blower and the mixer, for each burner type a specific **VENTURI washer** is required, **ITEM No 5**. Details of these are given on the next page:

Table of VENTURI washers

APG 061		VENTURI RING	SAP CODE
STEAM	BP	WHITE	12039656
	NG	WHITE	12039656
CONVECTION	BP	PINK	12045105
	NG	PINK	12045105
AG 101		**RING**	**SAP CODE**
STEAM	BP	WHITE	12039656
	NG	WHITE	12039656
CONVECTION	BP	RED	12039541
	NG	RED	12039541
APG102		**RING**	**SAP CODE**
STEAM	BP	GREEN	12044292
	NG	GREEN	12044292
CONVECTION	BP	ALL CLOSED	12039435
	NG	ALL CLOSED	12039435
APG201		**RING**	**SAP CODE**
STEAM	BP	GREEN	12044292
	NG	GREEN	12044292
CONVECTION	BP	RED/RED	12039541
	NG	RED/RED	12039541
APG202		**RING**	**SAP CODE**
STEAM	BP	WHITE WITH 11 MM OPENING	12039436
	NG	WHITE WITH 11 MM OPENING	12039436
CONVECTION	BP	TODO CERRADO	12039435
	NG	TODO CERRADO	12039435

6.- HIGH FREQUENCY SPARK GENERATOR (Ref SAP: 12039540)

The high frequency spark generator is controlled by the ignition control which guarantees the correct spark for ignition.

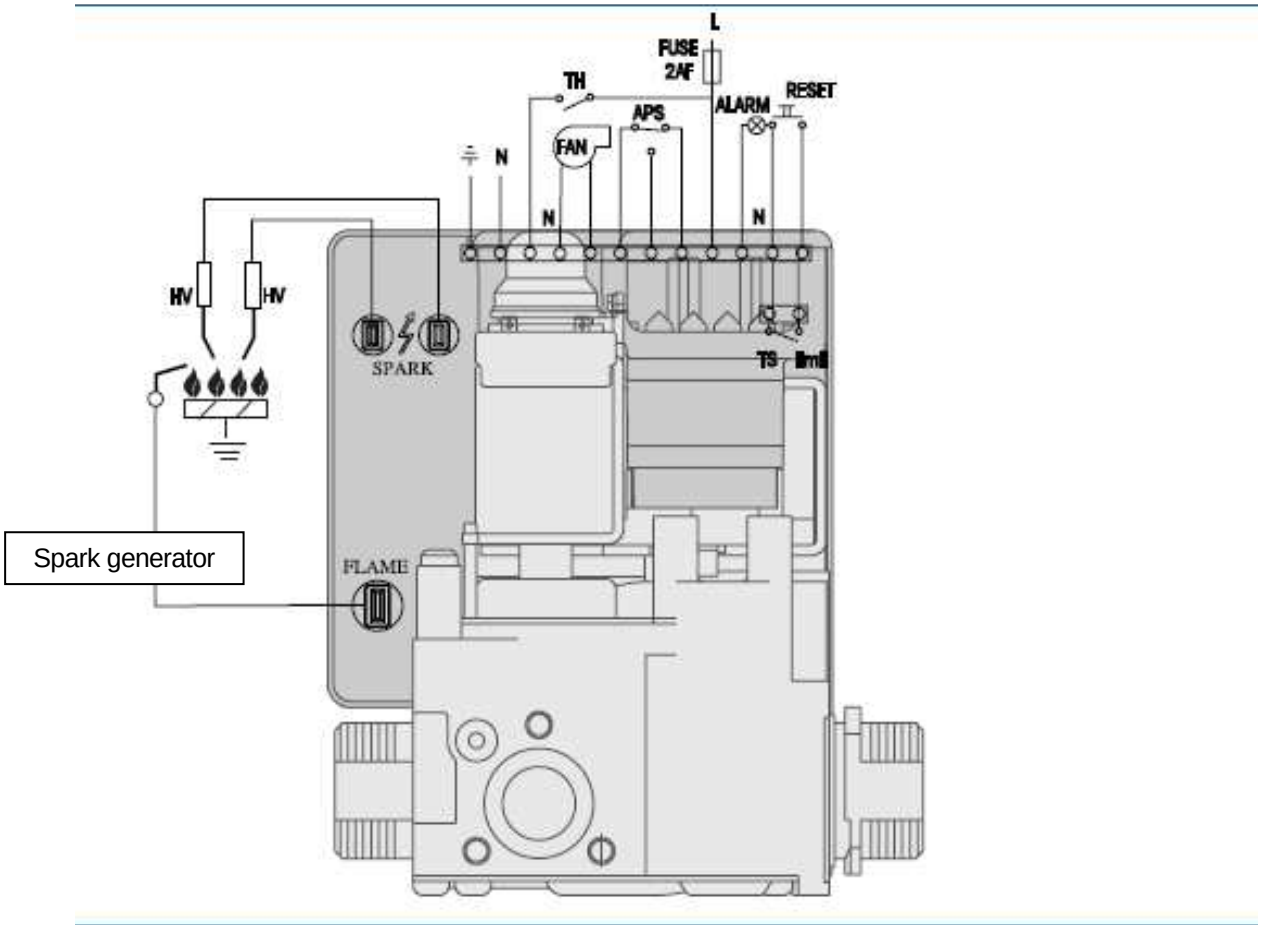
- IP 00
- Primary 220 V 50/60 Hz
- Secondary 15 KV 200 Hz 250 mAp

7.- IGNITION CONTROL SIT 579 DBC Ref. SAP: 12039440

Principal characteristics: This component is used to start and control the burner.

- Compact design
- Assembled directly onto the gas valve
- Ignition spark plug signal
- Flame ionisation detector
- Repetition of cycle when flame is lost during operation
- Reset
- Power supply 230 V AC
- Protection IP 40
- Minimum flame current 0.9 microA
- Recommended flame current > 3 x minimum current

ELECTRICAL DIAGRAM



After an initial check process, the ignition control activates the gas valve and the signal to the spark generator for this to activate the spark plug. A safety time period starts from this moment. The spark plug lights the flame in the burner and the flame is detected by the flame detector. If there is no flame, the system repeats the process until it lights or after three attempts, the system blocks, generating an ERROR.

8.- GAS VALVE (SIT) Ref. SAP: 12046364 50Hz, 12046365 60 Hz

In all models of GAS OVEN, the same GAS valve is used for the CONVECTION burner as for the STEAM burner. The characteristics of the valve are attached.

- Aluminium body
- Inlet filter
- 2 disconnection solenoid valves EV1 & EV2
- Gas inlet and outlet 3/4 B ISO 228
- Pressure test point diameter 9

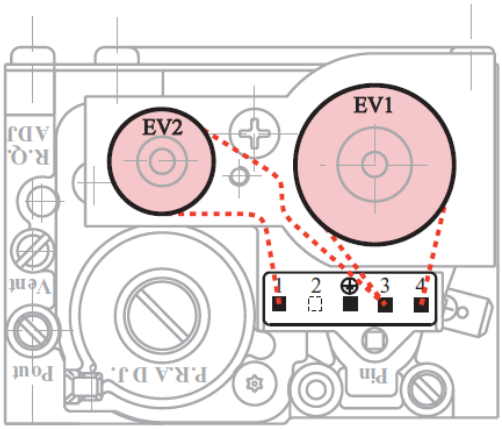
ELECTRICAL CONNECTION:

230 V 50 Hz (AC)
- Current mA EV1 : 40 - EV2 : 12

24 V 50 Hz (AC)
- Current mA EV1 : 390 - EV2 : 100

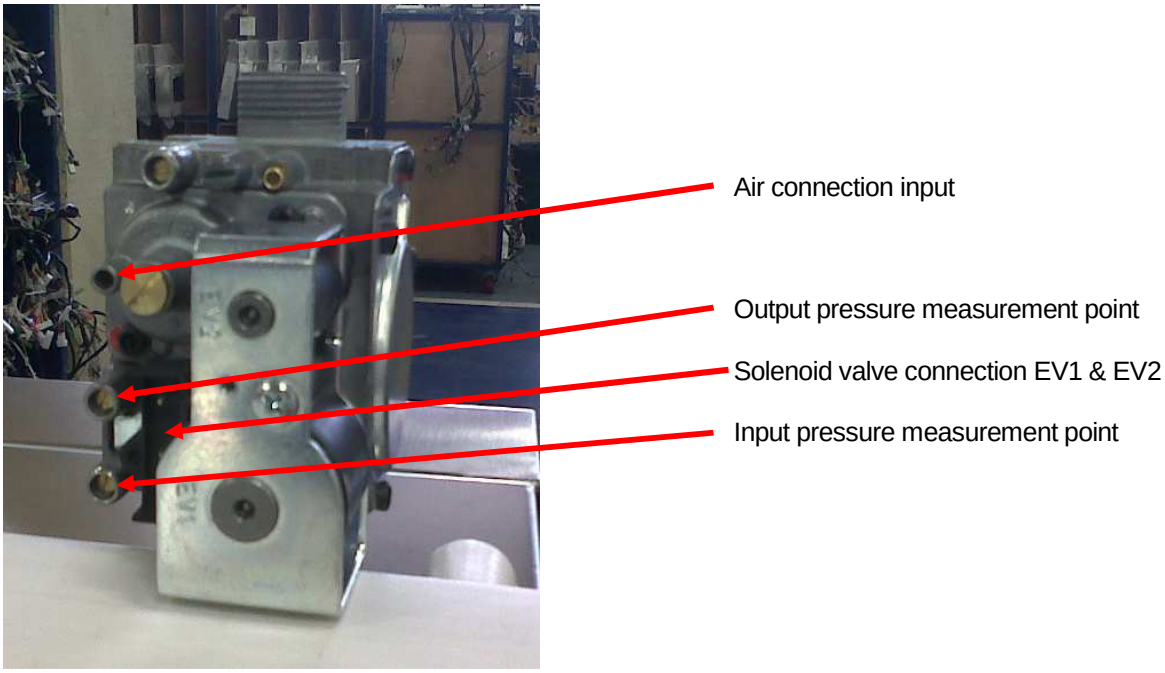
230 V 60 Hz (AC)
- Current mA EV1 : 48 - EV2 : 20

24 V 60 Hz (AC)
- Current mA EV1 : 480 - EV2 : 120



If for any reason it is necessary to change the GAS valve, no adjustments are required.

The possible action to the valve is to measure the input and output pressures, as shown in the attached photo (the values vary depending on the type of GAS):


Air connection input
Output pressure measurement point
Solenoid valve connection EV1 & EV2
Input pressure measurement point

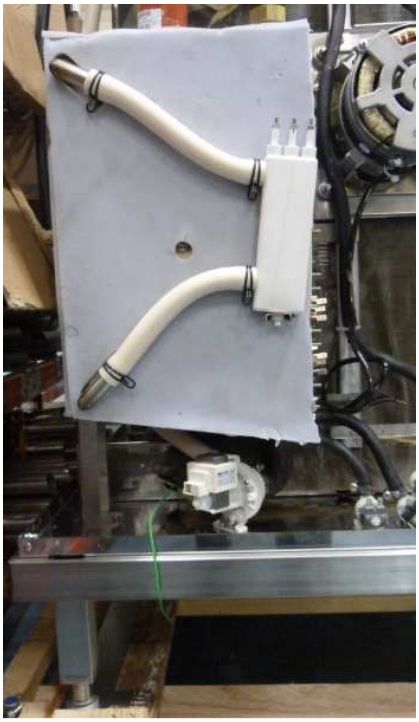
FAGOR

FAGOR INDUSTRIAL

HEATING SYSTEM IN STEAM MODE (moist heat)

The STEAM heating mode uses resistors in the ELECTRIC MODEL and gas burners in the GAS MODEL.

First determine the capacities of the **STEAM GENERATORS** by model:



	AE-APE	AG-APG
061	3.25 litres	7.3 litres
101	5.5 litres	7.3 litres
201	7 litres	12.3 litres
102	7 litres	12.3 litres
202	11.7 litres	15.3 litres

The following modification should also be considered: **NEW DESIGN of the STEAM GENERATOR** with the base inclined as shown in the top photo. This change has helped to improve the cleaning of the BOILER.

The element common to the steam generator for both the electric and gas models is the **LEVEL BOTTLE**. This is the same in both models, as described below:

- Cuando el nivel del agua está por debajo del nivel mínimo, la salida VDV da paso a la entrada de agua y deja de actuar el calentamiento de vapor.

R1 >= 40 KH R2 >= 40 KH Actúa VDV

- Cuando el nivel del agua alcanza el nivel mínimo, la salida VDV continúa actuando.

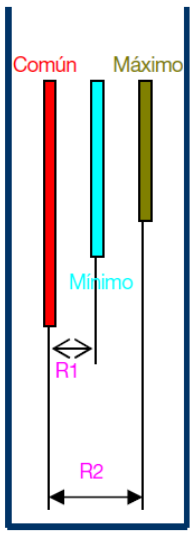
R1 =< 20 KH R2 >= 40 KH Actúa VDV

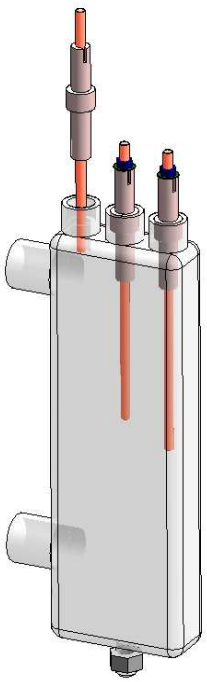
- Cuando el nivel del agua alcanza el nivel máximo, la salida VDV corta la entrada de agua y da paso al calentamiento de vapor por medio de CV.

R1 =< 20 KH R2 =< 20 KH No actúa VDV

- Cuando se haya evaporado el agua y el nivel descienda por debajo del nivel máximo, la salida CV continúa actuando.

R1 =< 20 KH R2 >= 40 KH No actúa VDV





HEATING SYSTEM STEAM GENERATOR ELECTRIC OVENS

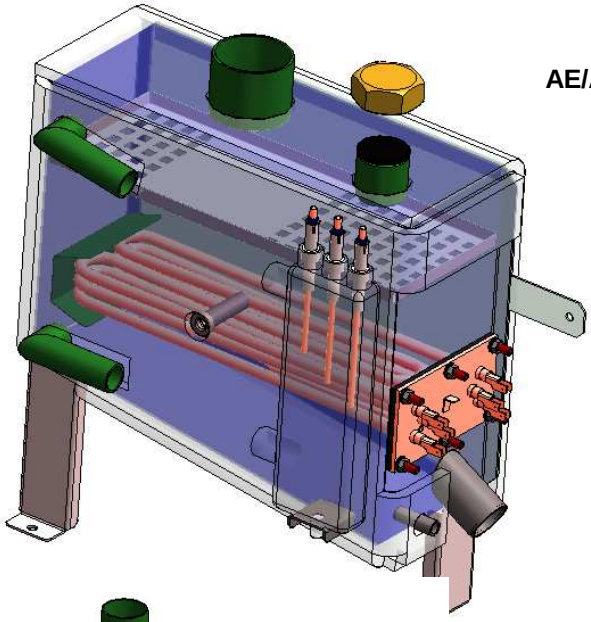
FAGOR INDUSTRIAL

We attach a detailed list of the electric STEAM GENERATORS, together with the resistors by model and heating power.

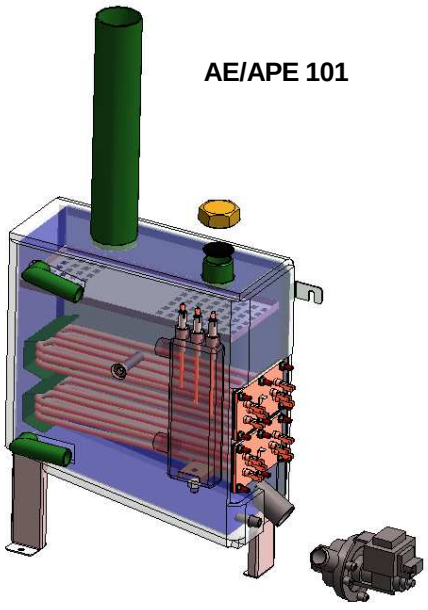
MODEL	RESISTORS	SAP CODE	TOTAL POWER
61	3x3000W 230 V (X 1)	12024752	9 KW
101	3x3000W 230 V (X 1) 3X3000 W (X 1)	12024752 (X 1) 12024747 (X 1)	18 KW
102	3x3000W 230 V (X 1) 3X3000 W (X 2)	12024752 (X 1) 12024747 (X 2)	27 KW
201	3x3000W 230 V (X 1) 3X3000 W (X 2)	12024752 (X 1) 12024747 (X 2)	27 KW
202	3x3000W 230 V (X 1) 3X3000 W (X 5)	12024752 (X 1) 12024747 (X 5)	54 KW

Note: ACE models are not equipped with a STEAM GENERATOR

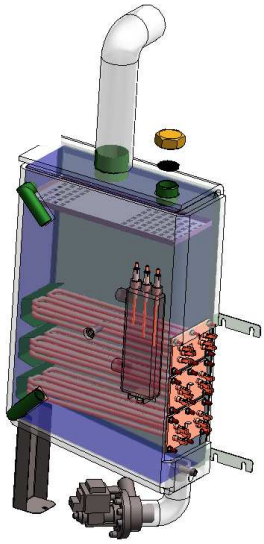
AE/APE 061



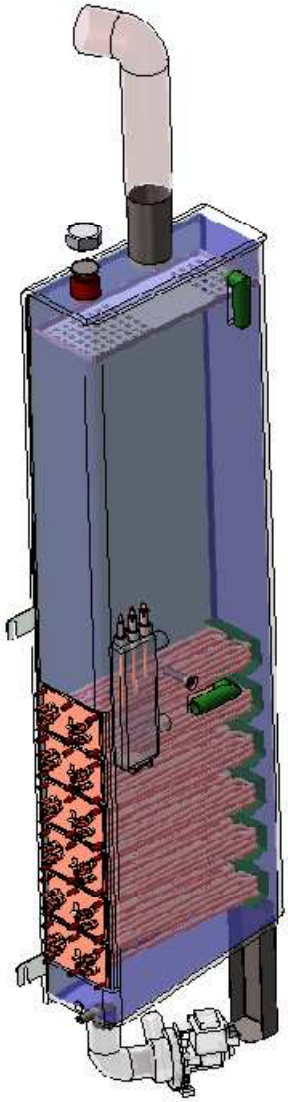
AE/APE 101



AE/APE 102 & 201



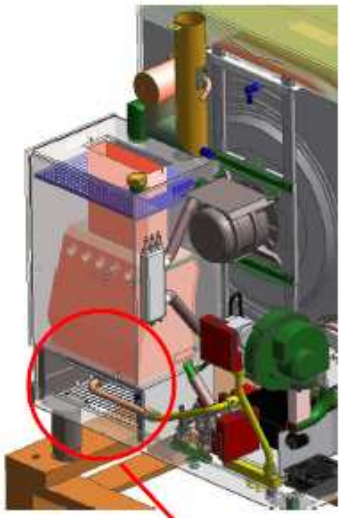
AE/APE 202

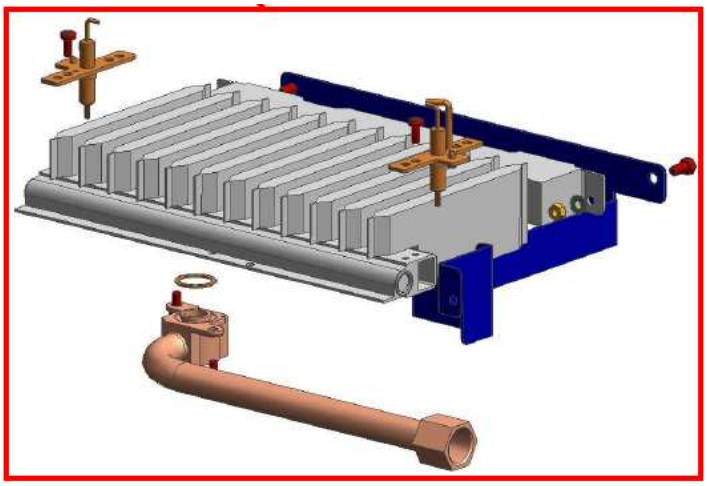


HEATING SYSTEM STEAM GENERATOR GAS OVENS

This could be said to be the system with the most innovations with respect to the previous VISUAL series. We have moved from an atmospheric STEAM GENERATOR heating system to a far more powerful DIRECT GAS burner heating system, thus improving the STEAM GENERATION FUNCTION.

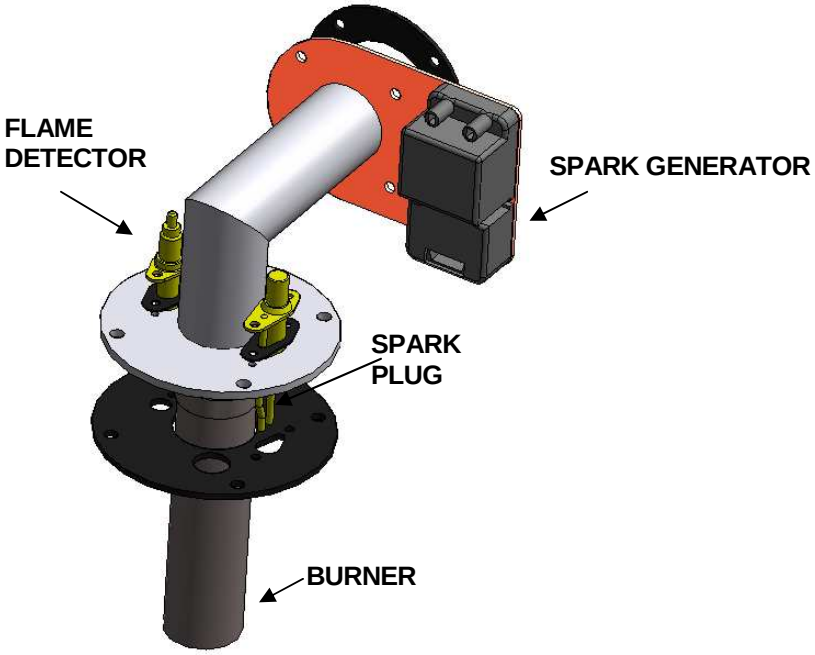
FORMER VISUAL SYSTEM (ATMOSPHERIC BURNER)



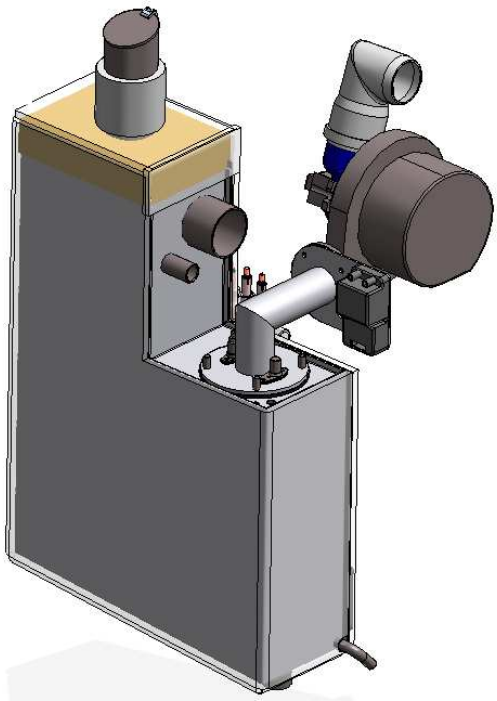


NEW ADVANCE SYSTEM (DIRECT GAS BURNER)

Basically, this is the same system as the one used in the CONVECTION HEATING SYSTEM of the oven chamber, explained above.



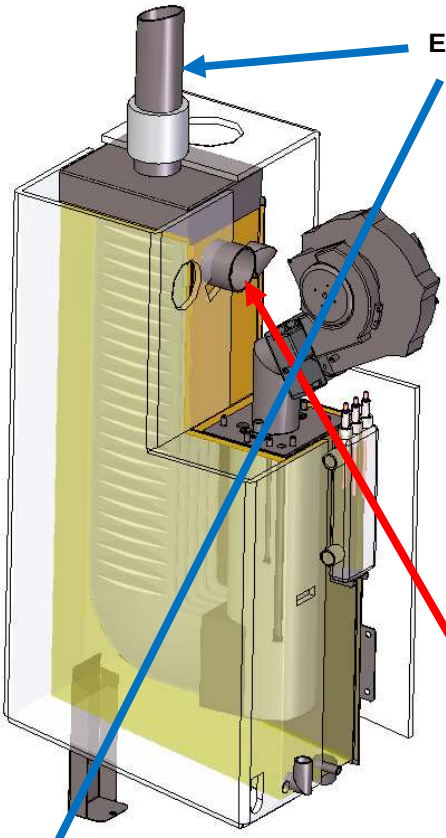
AG/APG 061-101

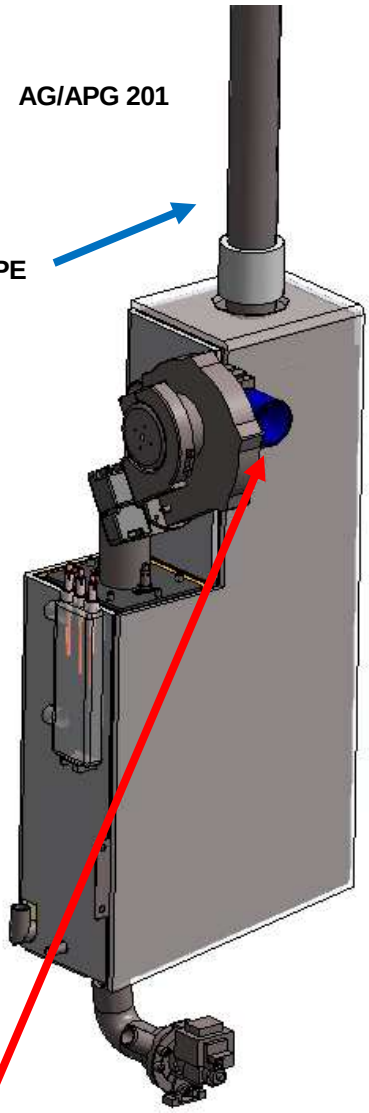


AG/APG 201

AG/APG 102

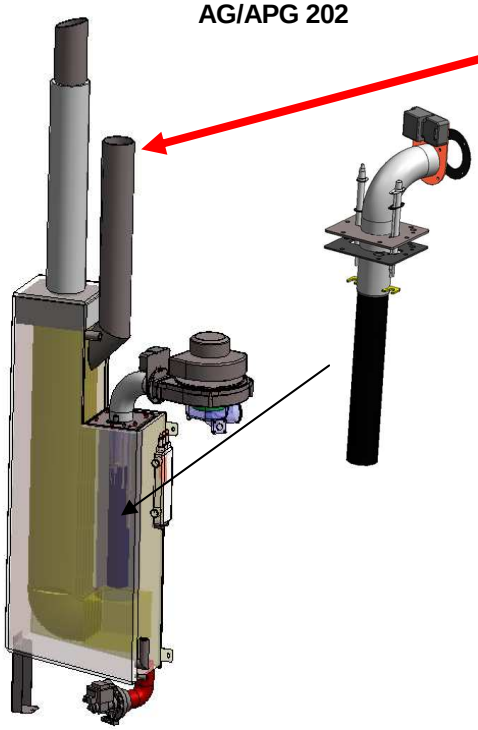
EXTERIOR FLUEPIPE





AG/APG 202

CHAMBER STEAM PIPE



Depending on the volume of the STEAM GENERATOR, different “sizes“ of burners are used, as listed below:

AG/APG 061-101: Ref SAP BURNER: **12039583**

AG/APG 102 : Ref SAP BURNER: **12044278**

AG/APG 201 : Ref SAP BURNER: **12044424**

AG/APG 202 : Ref SAP BURNER: **12039427**

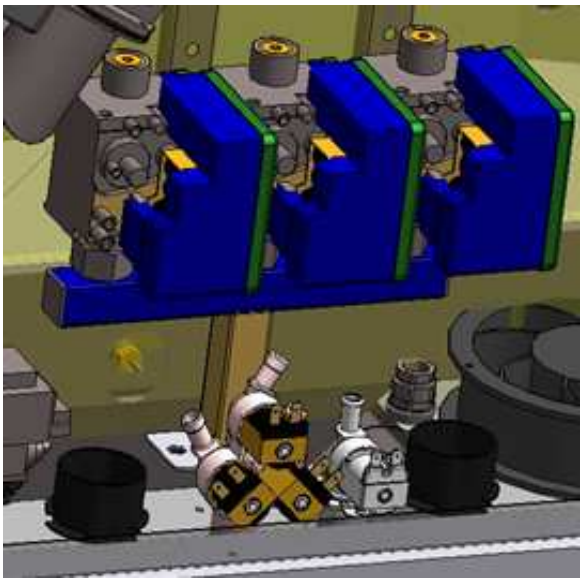
FAGOR INDUSTRIAL

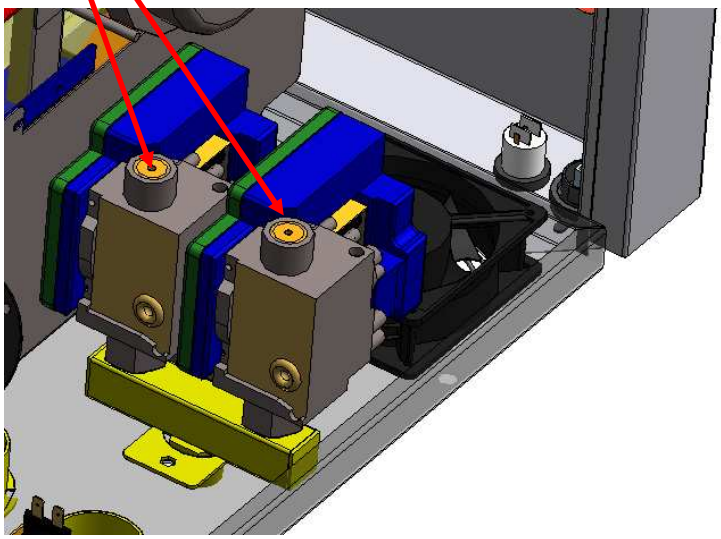
GAS CONVERSIONS

IN THE NEW ADVANCE ovens, the conversion of the oven for use with different types of gas is simple.
In the mixed models (**AG, APG**) two burners are considered (**CONVECTION & STEAM**) and in the ACG models, it is only necessary to consider the **CONVECTION** burner.

The required modifications are as follows:

1. Mount the **CORRECT NOZZLE INJECTOR** on the gas valve in accordance with the attached tables (LPG or NG)
2. Adjust **THE BLOWER SPEEDS IN THE SAT MENU**

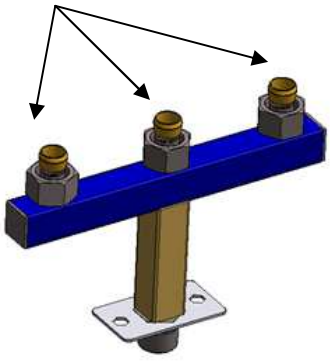




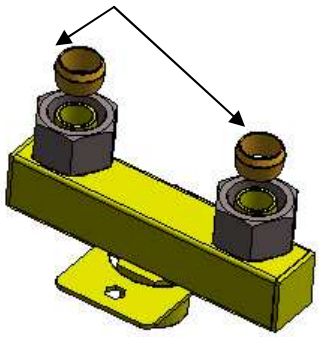
GAS VALVES & IGNITION CONTROL 061-101-102

GAS VALVES & IGNITION CONTROL 201 – 202

Bicone closure



Bicone closure



The procedure for converting to a different gas for each model of gas oven is described below. This conversion should only be carried out by an authorised technical service. To ensure that the conditions of the appliance correspond to those defined at the factory, check that the CO values are less than 1000 ppm and the Lambda value is between 1.2-1.4 (VERY VERY IMPORTANT)

ACG-AG-APG 061 Models:

	QUEMADOR CONVECCION/ Hot-air burner				
	Ignition Speed	Max. Speed	Min. Speed	Ø Injector	Reference
LPG (G30-G31)	3500	5700	3600	Ø 4.4	12039657
NG (G20)	4000	6500	4200	Ø 6	12039566

	QUEMADOR VAPOR/ Steam burner			
	Ignition Speed	Max. Speed	Ø Injector	Reference
LPG (G30-G31)	4000	4300	Ø 3.5	12045658
NG (G20)	4000	5000	Ø 4.55	12039565

ACG-AG-APG 101 Models:

	QUEMADOR CONVECCION/ Hot-air burner				
	Ignition Speed	Max. Speed	Min. Speed	Ø Injector	Reference
LPG (G30-G31)	5000	6000	3600	Ø5	12039570
NG (G20)	5000	7500	4000	Ø7	12039569

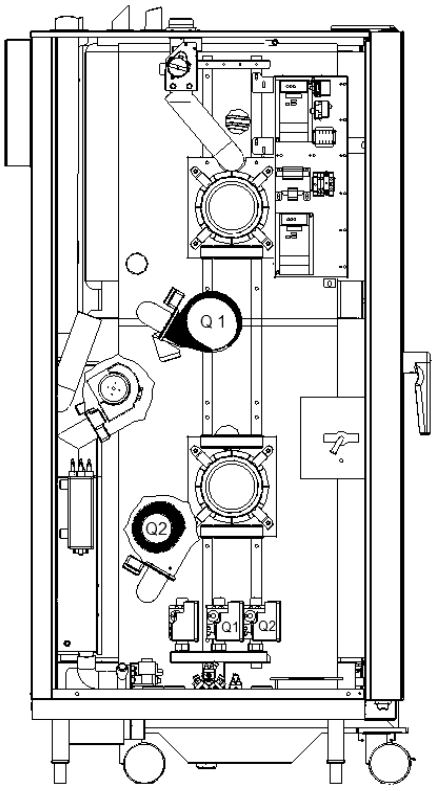
	QUEMADOR VAPOR/ Steam burner			
	Ignition Speed	Max. Speed	Ø Injector	Reference
LPG (G30-G31)	5000	5700	Ø 3.5	12045658
NG (G20)	5000	6400	Ø 4.55	12039565

ACG-AG-APG 102 Models:

	QUEMADOR CONVECCION/ Hot-air burner				
	Ignition Speed	Max. Speed	Min. Speed	Ø Injector	Reference
LPG (G30-G31)	5000	6000	3300	Ø 5.4	12045672
NG (G20)	5000	7500	4000	Ø 8	12045673

	QUEMADOR VAPOR/ Steam burner			
	Ignition Speed	Max. Speed	Ø Injector	Reference
LPG (G30-G31)	5500	5800	Ø 5.4	12045672
NG (G20)	5500	6600	Sin Inyector	

ACG-AG-APG 201 Models:



	QUEMADOR CONVECCION/ Hot-air burner				
	Q1-UPPER				
	Ignition Speed	Max. Speed	Min. Speed	Ø Injector	Reference
LPG (G30-G31)	4000	6200	3800	Ø 5.2	12045675
NG (G20)	4000	8000	4200	Ø 7.5	12045677

	QUEMADOR CONVECCION/ Hot-air burner				
	Q2- LOWER				
	Ignition Speed	Max. Speed	Min. Speed	Ø Injector	Reference
LPG (G30-G31)	4000	6200	3800	Ø 5.2	12045675
NG (G20)	4000	8000	4200	Ø7	12039569

	QUEMADOR VAPOR/ Steam burner			
	Ignition Speed	Max. Speed	Ø Injector	Reference
LPG (G30-G31)	4000	5500	Ø 5.4	12045672
NG (G20)	4000	6700	Sin Inyector	

ACG-AG-APG 202 Models:

	QUEMADOR CONVECCION/ Hot-air burner				
	Q1-UPPER				
	Ignition Speed	Max. Speed	Min. Speed	Ø Injector	Reference
LPG (G30-G31)	4000	6000	3500	Ø 5.2	12045675
NG (G20)	4000	8000	3800	Ø 7.5	12045677

	QUEMADOR CONVECCION/ Hot-air burner				
	Q2- LOWER				
	Ignition Speed	Max. Speed	Min. Speed	Ø Injector	Reference
LPG (G30-G31)	4000	6000	3500	Ø 5.2	12045675
NG (G20)	4000	8000	3800	Ø8	12045673

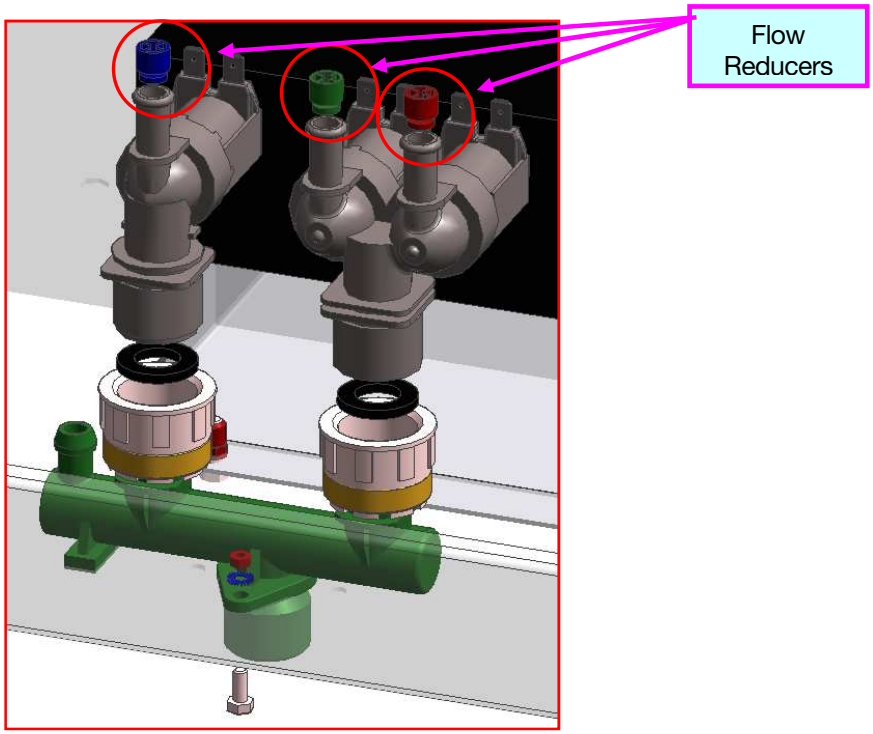
	QUEMADOR VAPOR/ Steam burner			
	Ignition Speed	Max. Speed	Ø Injector	Reference
LPG (G30-G31)	4000	6000	Ø6	12039566
NG (G20)	4000	7300	Sin Inyector	

FAGOR

FAGOR INDUSTRIAL

WATER SOLENOID VALVES

APPLIANCE	INSTALL:	REF. SAP	Reg.	CTD.	REF.SAP	COLOUR	OBSERVATIONS
AE / APE 061 /101/ 201	TRIPLE	12023921	8 l.	1	12024045	RED	BOILER
			0.25 l	1	12024509	GREEN	INJECTOR
			1l	1	12025263	YELLOW	CONDENSATION
ACE **061/101/201/102**	SIMPLE	12025161	1l	1	12025263	YELLOW	CONDENSATION
	SINPLE	12025161	0.25 l	1	12024509	GREEN	INJECTOR
AE / AG 10-21	TRIPLE	12023921	8 l.	1	12024045	RED	BOILER
			1l	1	12025263	YELLOW	CONDENSATION
			0.25 l	1	12024509	GREEN	INJECTOR
AE **202**	TRIPLE	12023921	1l	1	12025263	YELLOW	INJECTOR
			1l	1	12025263	YELLOW	CONDENSATION
			8 l.	1	12024045	RED	BOILER
ACE **202**	DOUBLE	12023794	1l	1	12025263	YELLOW	CONDENSATION
			1l	1	12025263	YELLOW	INJECTOR
ACG **061 / 101**	SINPLE	12025161	0.25 l	1	12024509	GREEN	INJECTOR
ACG **102/201/202**	SINPLE	12025161	0.5 l	1	12008692	ORANGE	INJECTOR
AG **101 / 201**	TRIPLE	12023921	8 l.	1	12024045	RED	BOILER
			1l	1	12025263	YELLOW	CONDENSATION
			0.25 l	1	12024509	GREEN	INJECTOR
AG **202**	TRIPLE	12023921	0.25 l	1	12024509	GREEN	INJECTOR
			8 l.	1	12024045	RED	BOILER
			1l	1	12025263	YELLOW	CONDENSATION



DESCALING

WARGING! The descaling function is performed by the SAT. All the relevant safety measures for preventing accidents should be observed. Procedure involving chemical products.

The chemical product used must have a **phosphoric acid base** at a concentration of 35 ÷ 40 %. It may contain an anti-foaming agent. A chemical concentration of approximately **10 ÷ 15%** of the capacity should be used in the boiler. This concentration depends on the degree of lime scale saturation and the effectiveness of the chemical product. Please refer to the supplier for advice on the method of application.

When the over automatically detects an excess level of lime scale in the pipes, the text DESCALING flashes on the display. The speed of the flash increases with the need for decaling, and when descaling is obligatory the message is permanently lit and the boiler heating is blocked (at this point the oven only operates in convection mode).

Lime scale detection

In any operating mode, if the TG probe reaches:

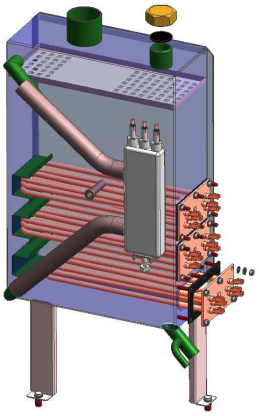
- 125 ºC The message ➔**"DESCALE"** is displayed in the upper text of the screen, and flashes every two seconds.
- 140 ºC The message ➔**"DESCALE"** is displayed in the upper text of the screen, and flashes every one second.
- 155 ºC The message ➔**"DESCALE"** is displayed in the upper text of the screen, and flashes every ½ second.
- 180 ºC The message ➔**"DESCALE"** is displayed continuously in the upper text of the screen, and the oven only operates in *Convection mode*.

Once the message **"DESCALE"** has been displayed, it will not disappear until descaling takes place, even though the TG temperature falls or if the oven is switched off. The message reappears when the oven is switched on.

Procedure for descaling

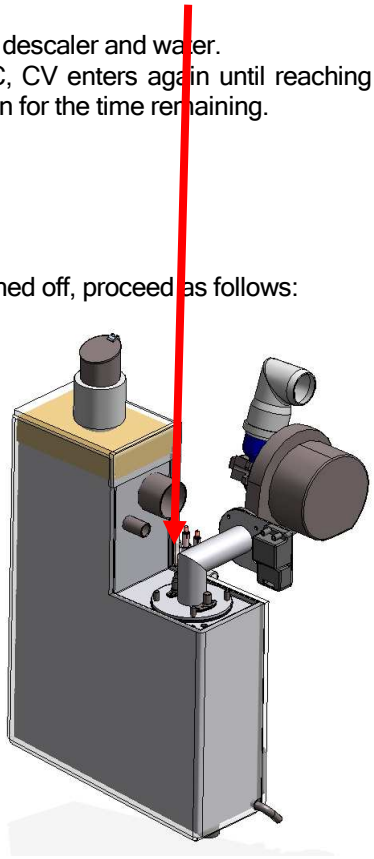
Phase 1: VAC operates for 3 minutes
The message **"SPRAY DESCALER"** is displayed and the process waits until the message is confirmed. Undo the side panel of the oven and access the steam generator. En los modelos **ELECTRICOS**, undo the descaling nut and pour the descaler in the steam generator. En los modelos a **GAS** soltar el conducto de vapor a cámara e introducir el desincrustante.
Phase 2: VDV operates until reaching the maximum level, the boiler fills with descaler and water.
Phase 3: CV operates until TG reaches 61ºC. When TG falls below 58 ºC, CV enters again until reaching 61ºC, this continues for the period selected by the user. The display shows a countdown for the time remaining.
Phase 4: VAC operates for 3 minutes
Phase 5: VDV operates until reaching N.max.
Phase 6: VAC operates for 3 minutes.
Phase 7: VDV operates until reaching N.max.
Phase 8: Steam mode operates until TC reaches 95ºC.

If, during the descaling cycle, the operation is aborted or the oven is switched off, proceed as follows:
- If it has not reached phase 2 ➔ The cycle is ended
- If it has reached or exceeded phase 2 ➔ The cycle goes to phase 4.
- If it has reached phase 4➔The cycle goes to the phase in which it stopp



APE

APG

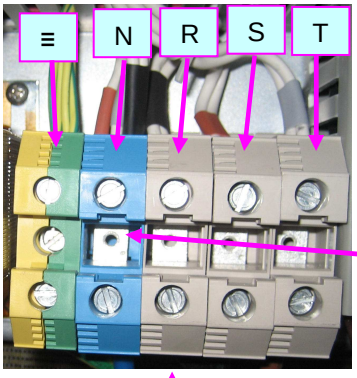


FAGOR

FAGOR INDUSTRIAL

ELECTRICAL CONVERSION from 400 c 3P+N+E to 230 V 3P+E

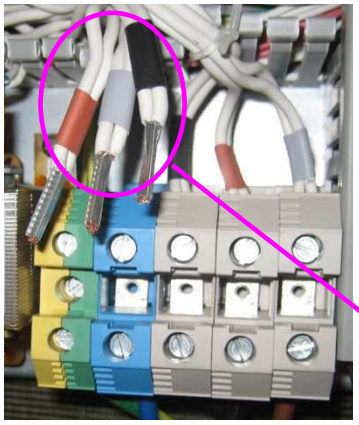
This conversion is only valid for electric ovens, as GAS ovens are single-phase.



- To convert the oven electrically, release the three groups of cables (black, brown and grey) from the Neutral terminal strip).

Neutral terminal strip

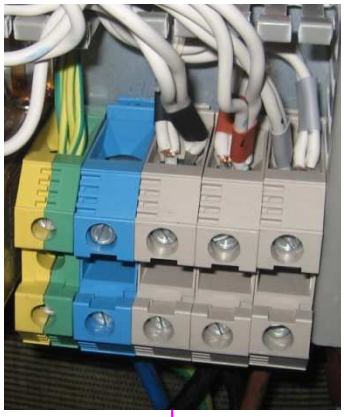
400 Volt connection
3P+N+E



- When the three groups of cables have been released from the Neutral terminal strip, place them on the R, S and T terminal strips, matching the colours, black, brown and grey (black-black, brown-brown, grey-grey).

Group of black, brown and grey cables

Conversion



- After the electrical conversion, the Neutral terminal strip is no longer used.

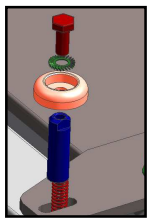
240 Volt connection
3P+E

DOOR

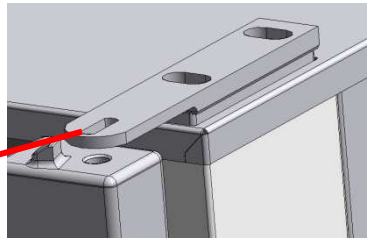
Another element that has been considerably improved is the door. The upper and lower fastenings have been redesigned as can be seen in the attached photos.

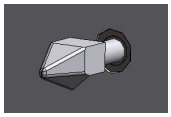
There are two different types of FAMILY or RANGE:

1. **ACG / AG/APG/ACE/AE/APE 061-101-102**

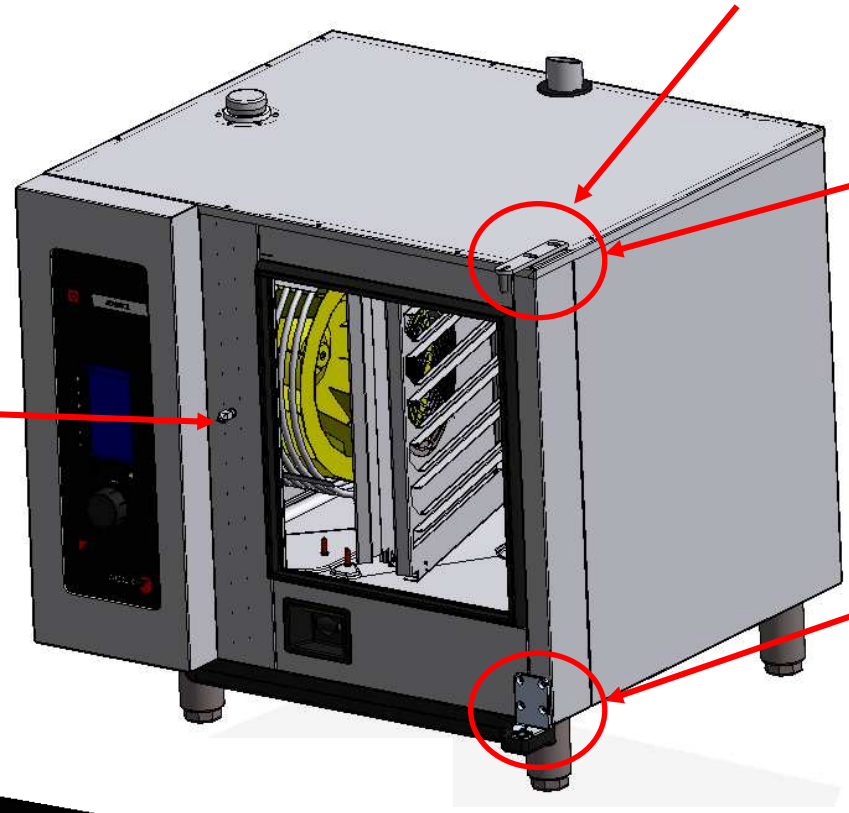


Adjustment of door misalignment

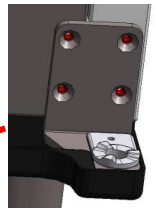


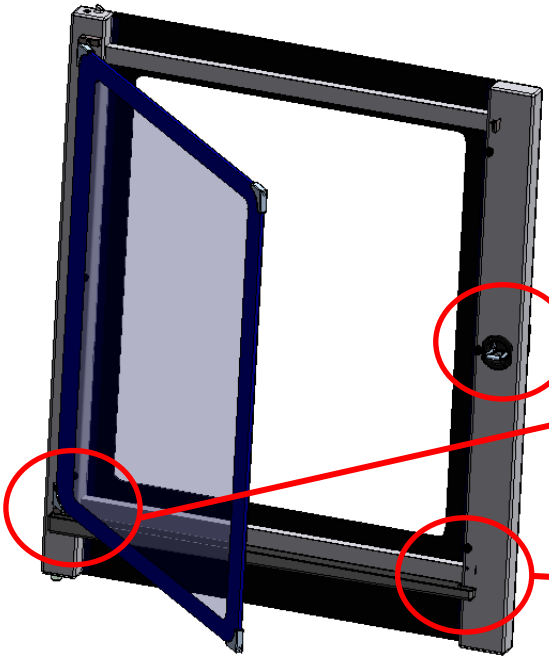


Position of bolt closure

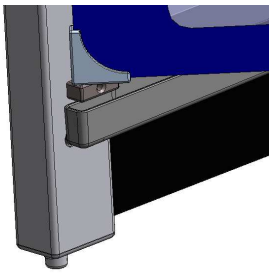


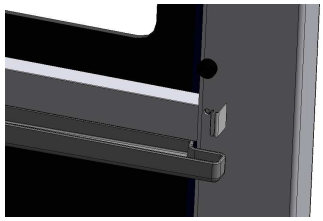
Adjustment of seal closure



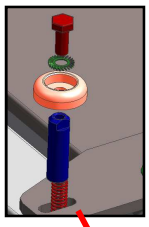


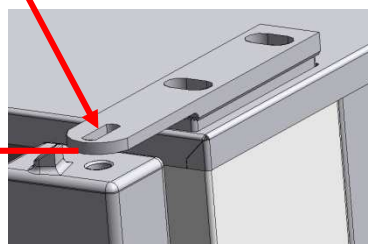
COMPLETE HANDLE 12044773

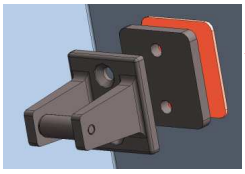


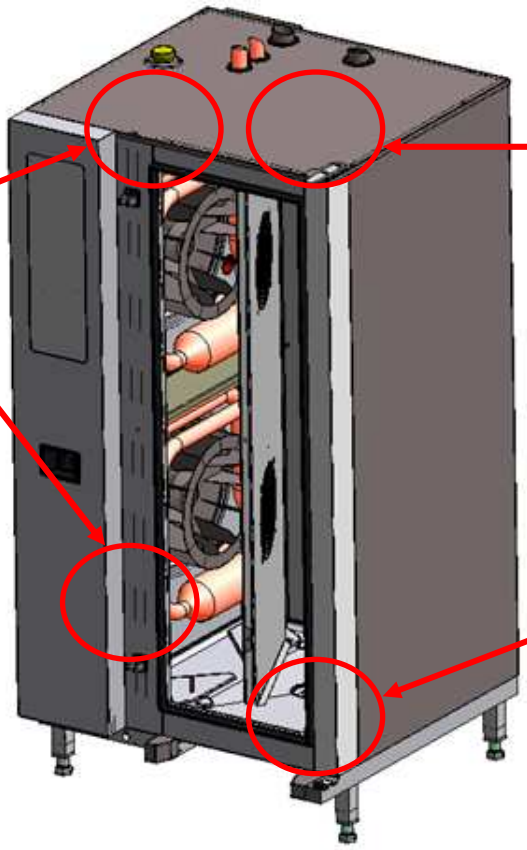


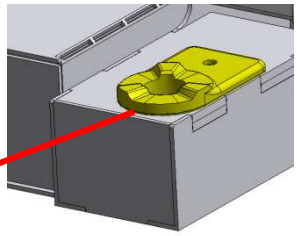
2.- ACG / AG / APG / ACE / AE / APE 201-202

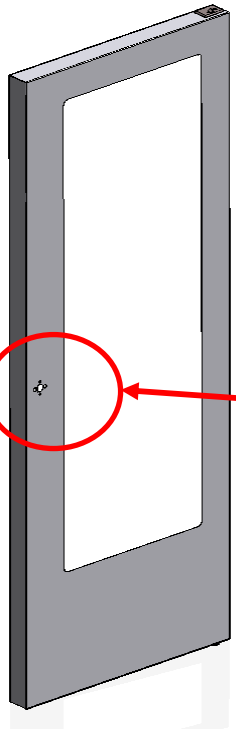


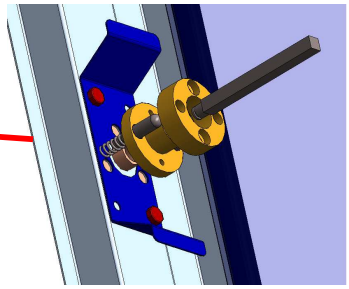




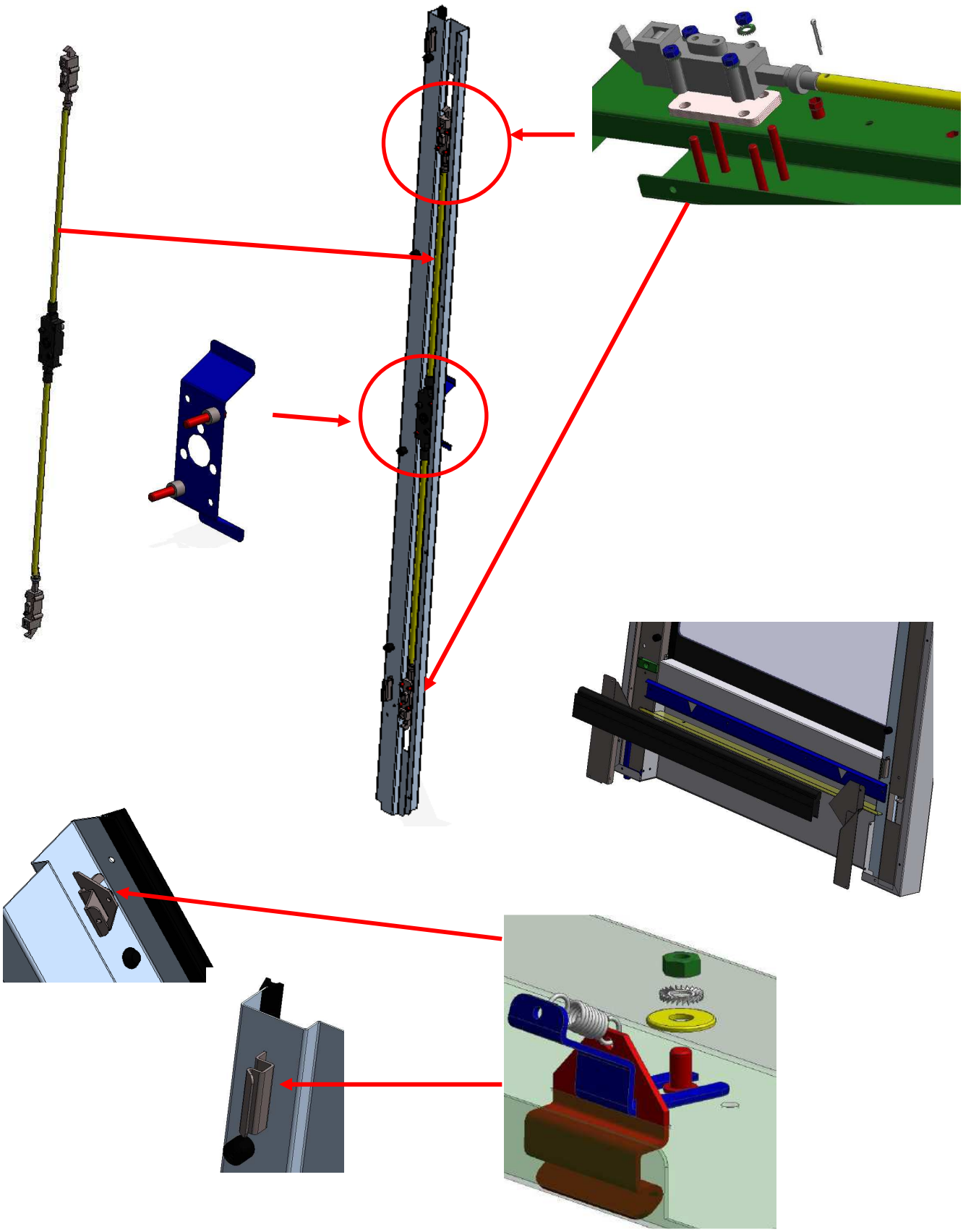






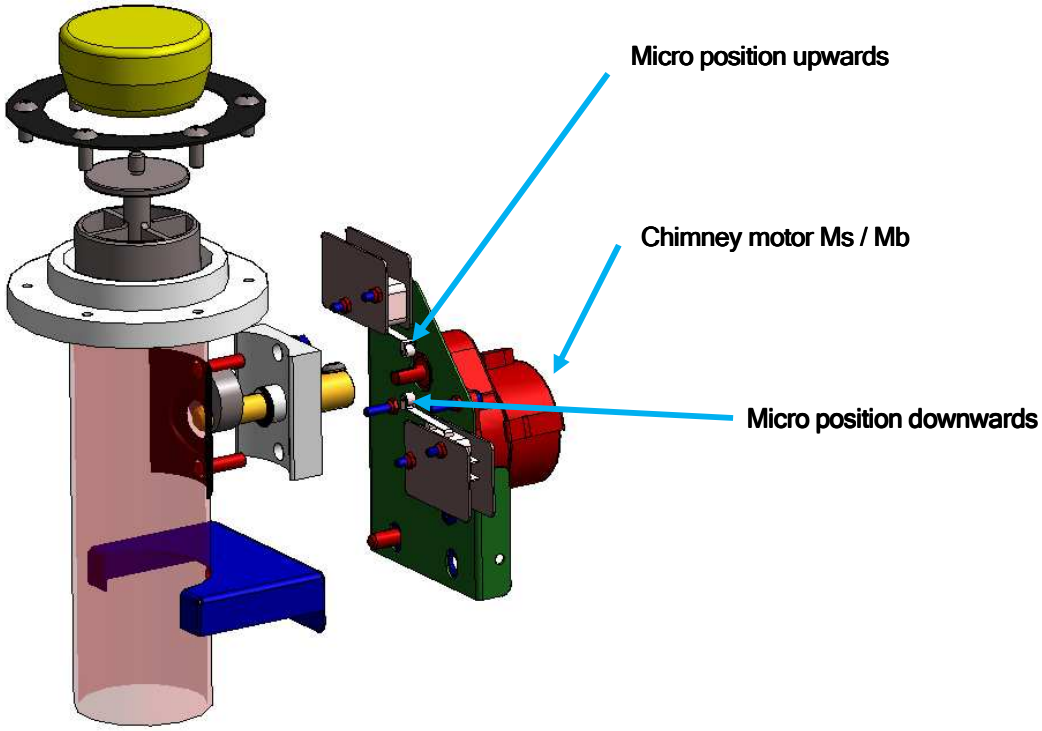


COMPLETE HANDLE: 12044776



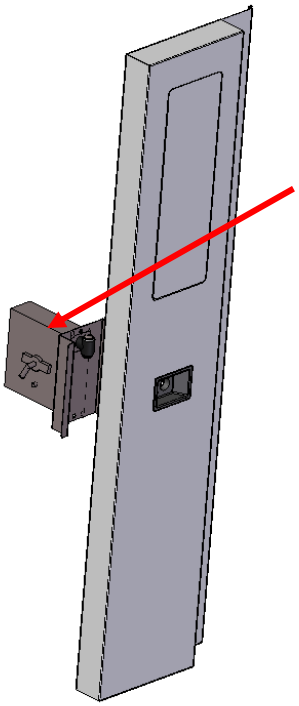
FLUEPIPE

Position of bolt closure



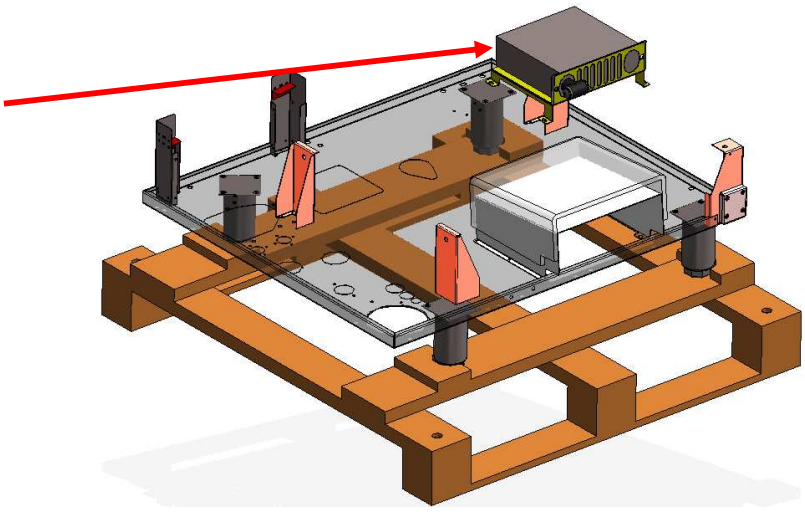
RETRACTABLE SHOWER

The retractable shower is fitted as standard in the following models AG / APG / AE / APE and may be located in different positions depending on the function of the family of ovens. The difference between the 061-101-102 & 201-202, is shown in the attached diagrams.



201 & 202

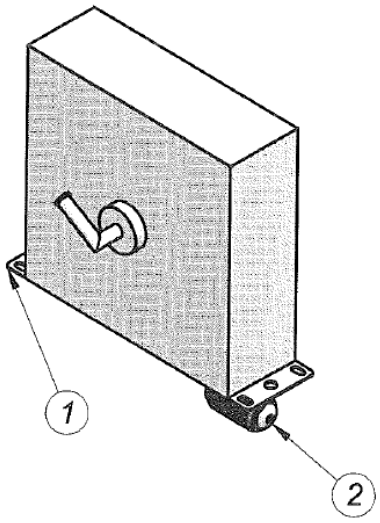
SAP CODE: 12024800



061-101-102

To replace components individually, the part references should be attached:

1.- SHOWER BODY: 12039158
2.- SHOWER HANDLE: 12010475



APE / APG WASH SYSTEM

This section describes how the wash process works and the components involved:

When the required wash programme has been selected, check that the IP is closed and that the TC temperature probe indicates less than 65ºC, with the following warning if this is not the case: "**HIGH TEMP OVEN COOLING**". In this case, cooling is automatic.
When the 2 conditions shown have been met, the selected wash programme starts, following the sequence below:

1. LZ and Ms/Mb operate. The display must indicate the chamber temperature and the time left to complete the selected programme.

2. The fluepipe behaves as follows:

   - Electric oven: Fluepipe open

   - Gas oven: Fluepipe open

3. VAC operates for 3 seconds, the level of the boiler should drop below the minimum level. If the low level is not reached, after 5" re-operate the VAC for a further 3" and continue so. If after 1 minute the minimum level is not reached, the corresponding error is displayed. (**See Errors section**).

4. Operate VDV until maximum level is reached. If this is not reached within 7 minutes, the corresponding error should be displayed. (**See Errors section**).

5. Next follow the instructions for each wash programme (See operation for each wash type)
   There is an option to abort the current wash programme by pressing the START/STOP button. It proceeds as follows if the drying phase has not been reached (if it has, the wash cycle is considered to have ended).

   - The message “WASH INTERRUPTED” is displayed on the screen.
   - When the user confirms this message, the cycle proceeds to the rinse stage, displaying the message “RINSING”
   - Mc operates for 30”.
   - The rinse cycle is run

Similarly, if the controller was switched off during the wash cycle without reaching the drying cycle, the above sequence is followed when the oven is switched back on.

If the oven is switched off during the rinse cycle, the complete rinse sequence must be run when the oven is switched on again.

There is a secret sequence to abort the rinse cycle: Press the ON button and then press the START/STOP button for 5 seconds.

6. Lastly, everything is switched off, all the outputs are set to zero and the display shows the message “**END OF WASH**”.

If the door is opened during a wash cycle, the programme must be stopped, and restarted when the door is closed.

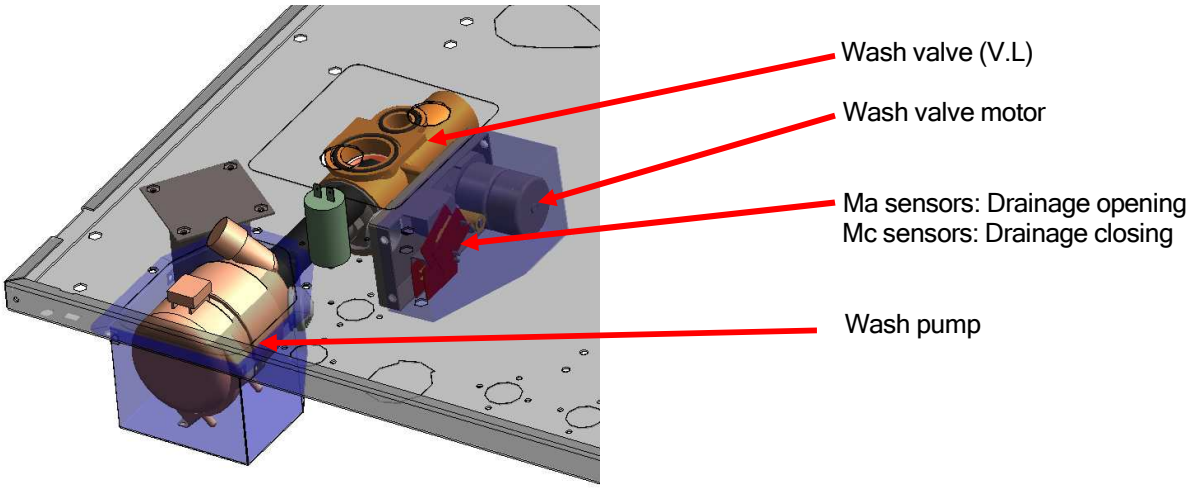
NOTE: Whenever it is not in a wash cycle, the wash valve (V.L) should be open, so that the water from the condensation box flows to DRAINAGE (**micro Ma activated**). To the contrary, whenever the wash process is selected and is in process, the wash valve (V.L) should be closed, so that the water from the condensation box is used in this process (**micro Mc activated**)

WASH SYSTEM COMPONENTS

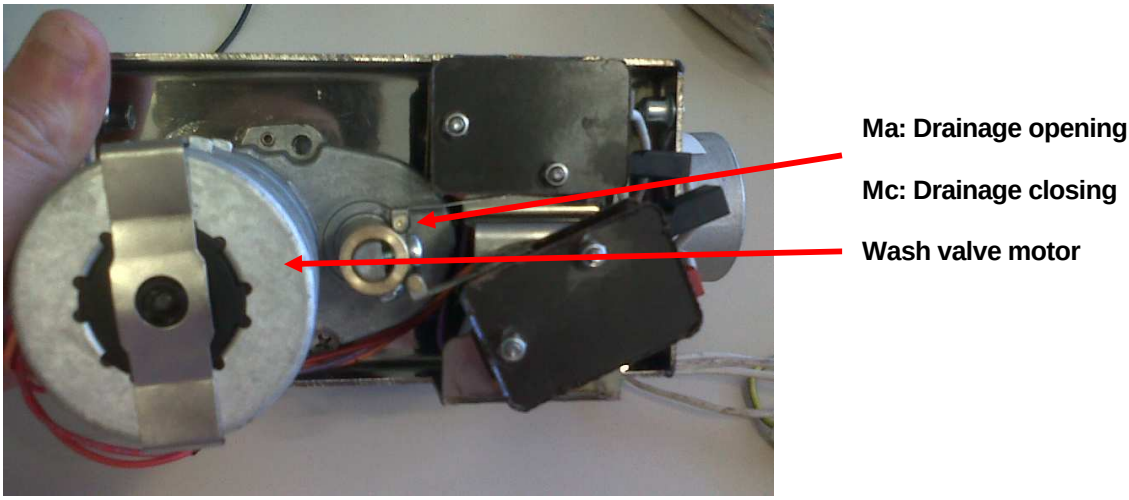
The wash system is made up of the following components:

1.- Wash valve
2.- Wash valve motor
3.- Sensors
4.- Wash pump (B.L)
5.- Wash box

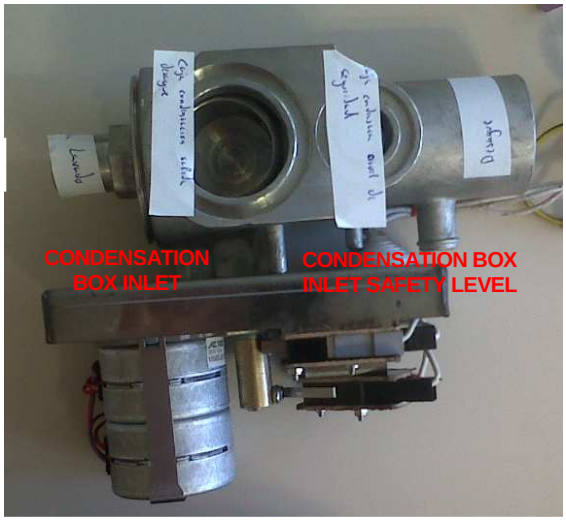
All the components listed can be identified in the following photo:



Detailed view WASH VALVE + WASH VALVE MOTOR + Ma-Mc Sensors

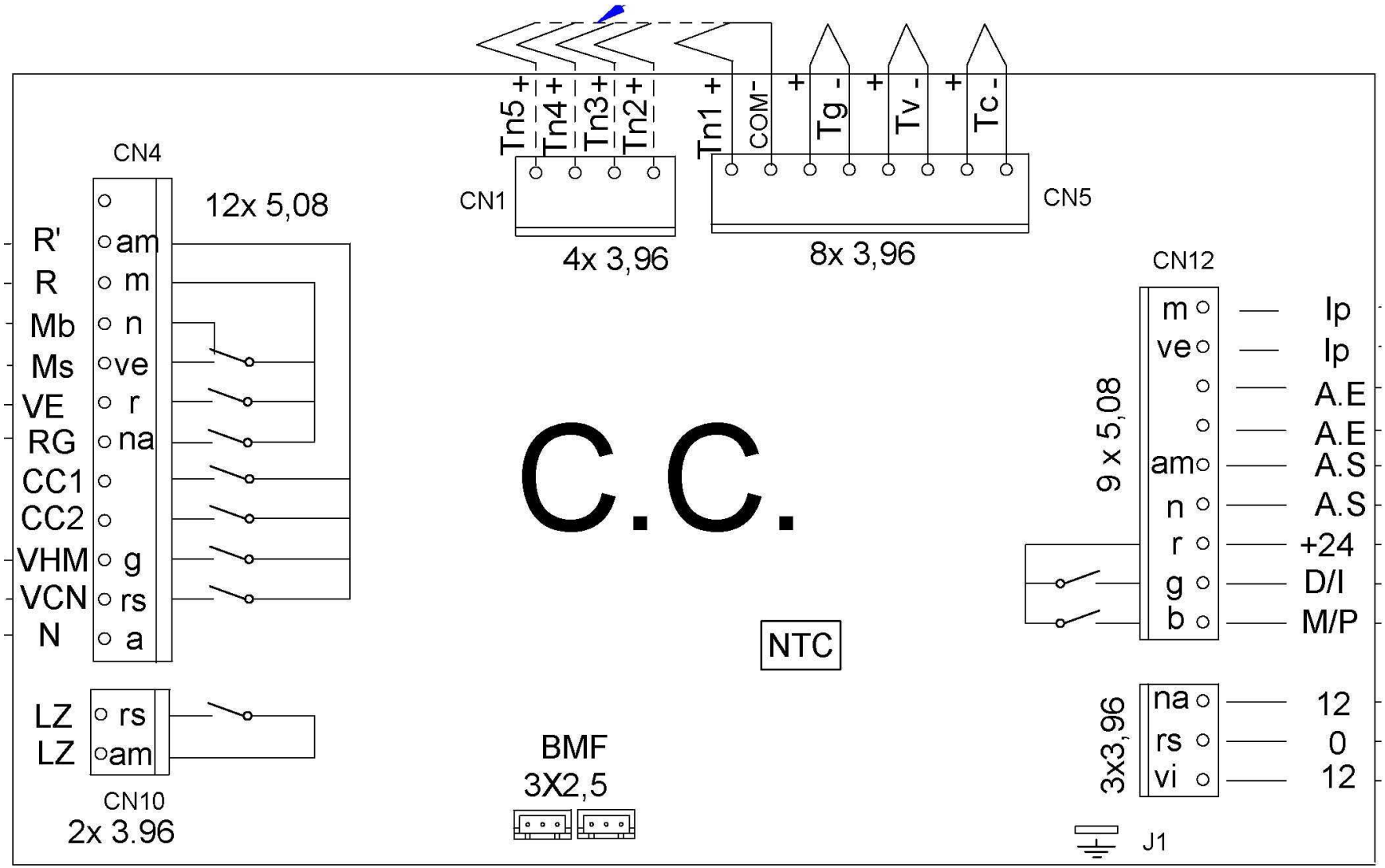


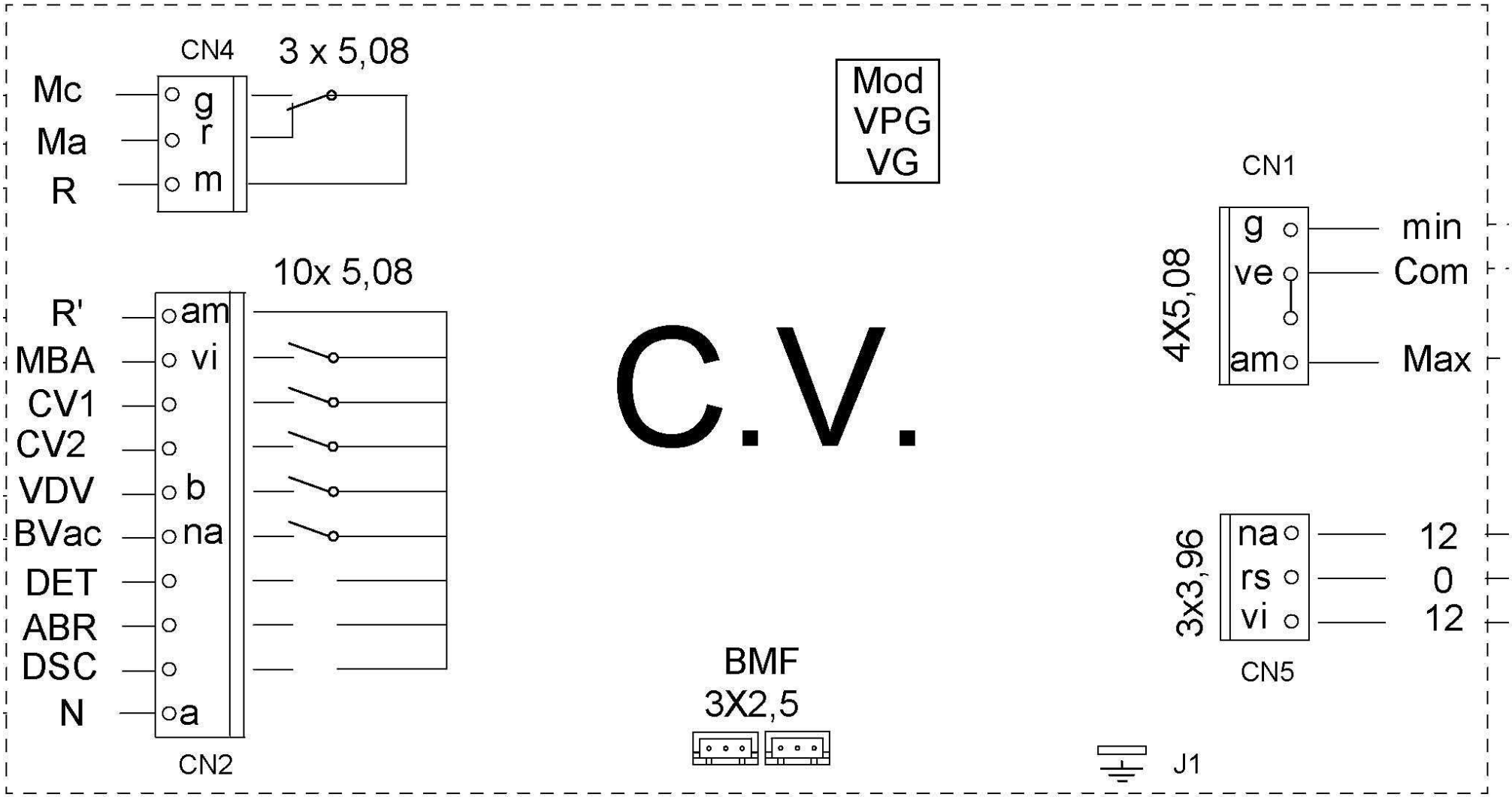
WASH PUMP INLET



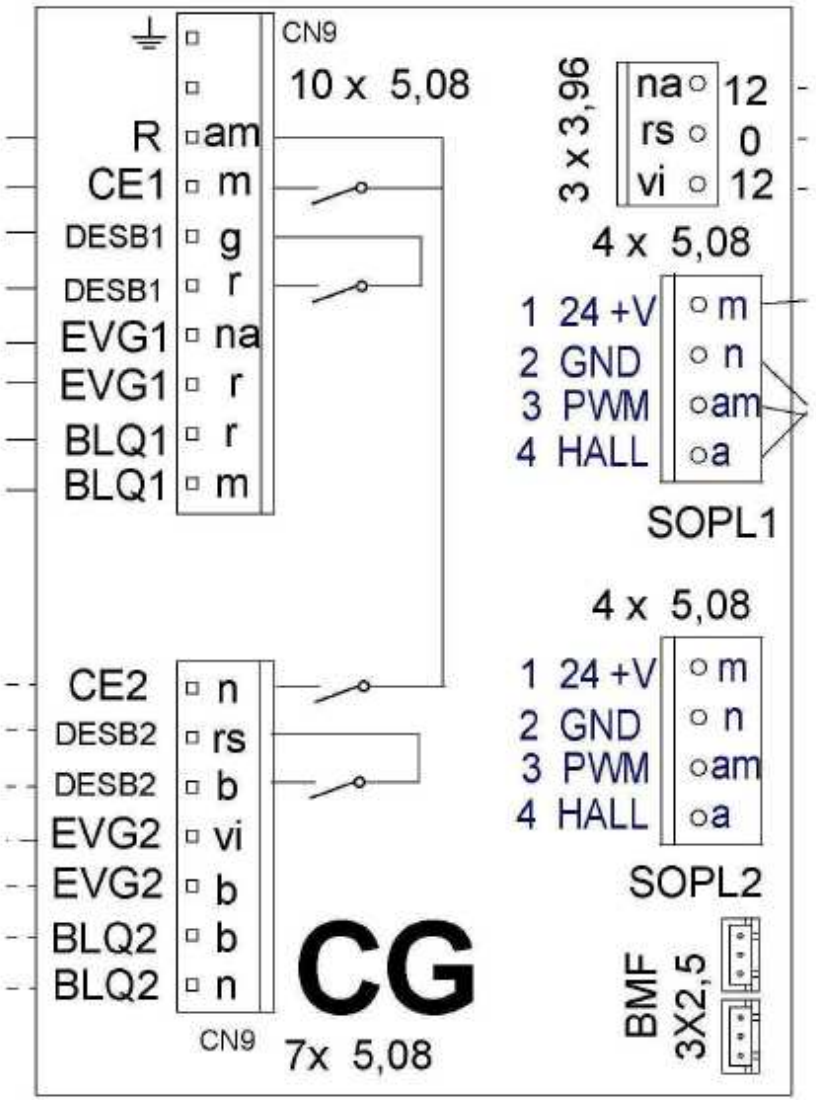
DRAINAGE OUTLET

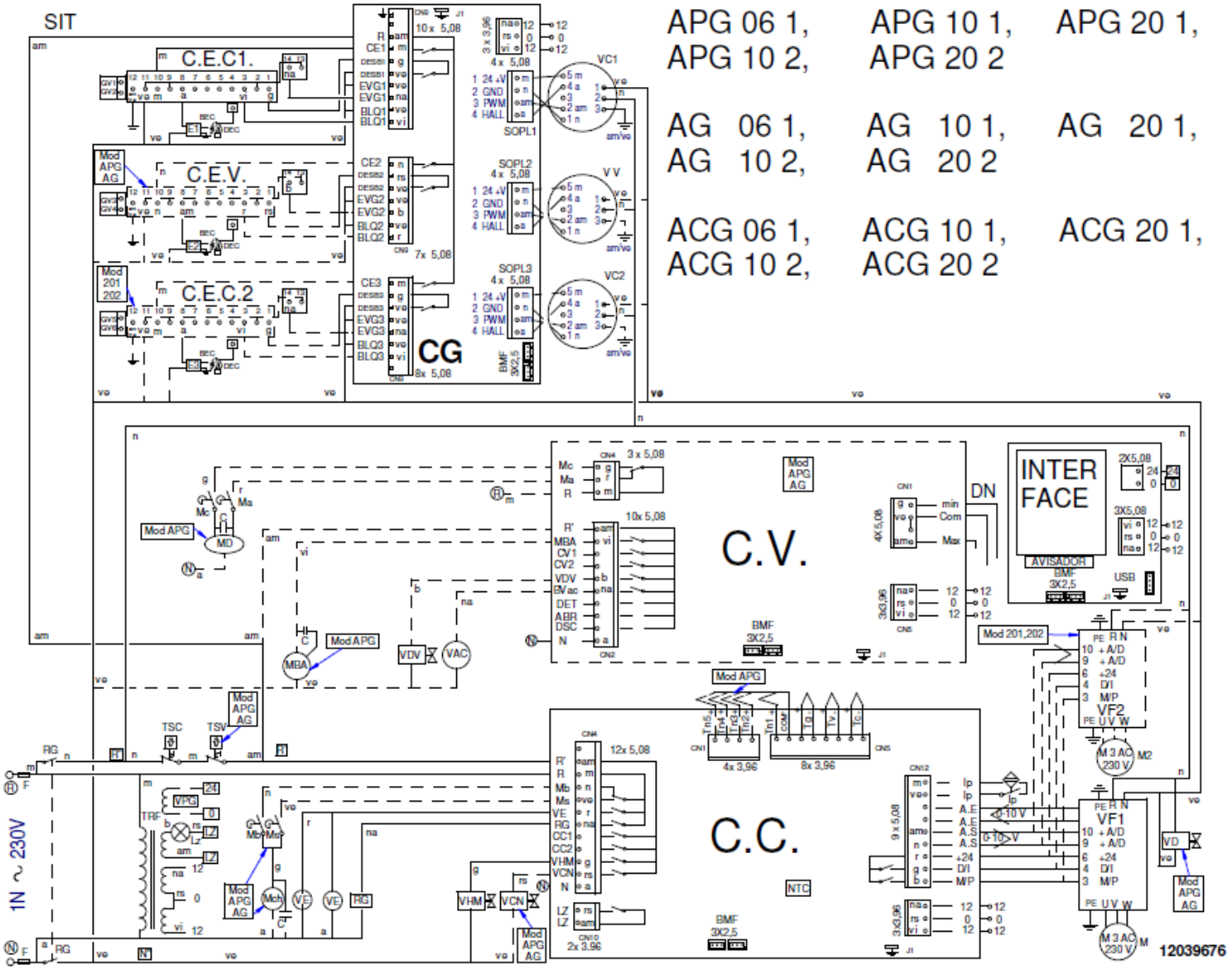
ELECTRIC CIRCUIT DIAGRAMS




CN4
3 x 5,08
Mc
Ma
R
g
r
m
Mod
VPG
VG
CN1
4X5,08
g
ve
am
min
Com
Max
10x 5,08
R'
MBA
CV1
CV2
VDV
BVac
DET
ABR
DSC
N
am
vi
b
na
a
C.V.
3x3,96
na
rs
vi
12
0
12
CN5
BMF
3X2,5
J1
CN2

FAGOR
FAGOR INDUSTRIAL



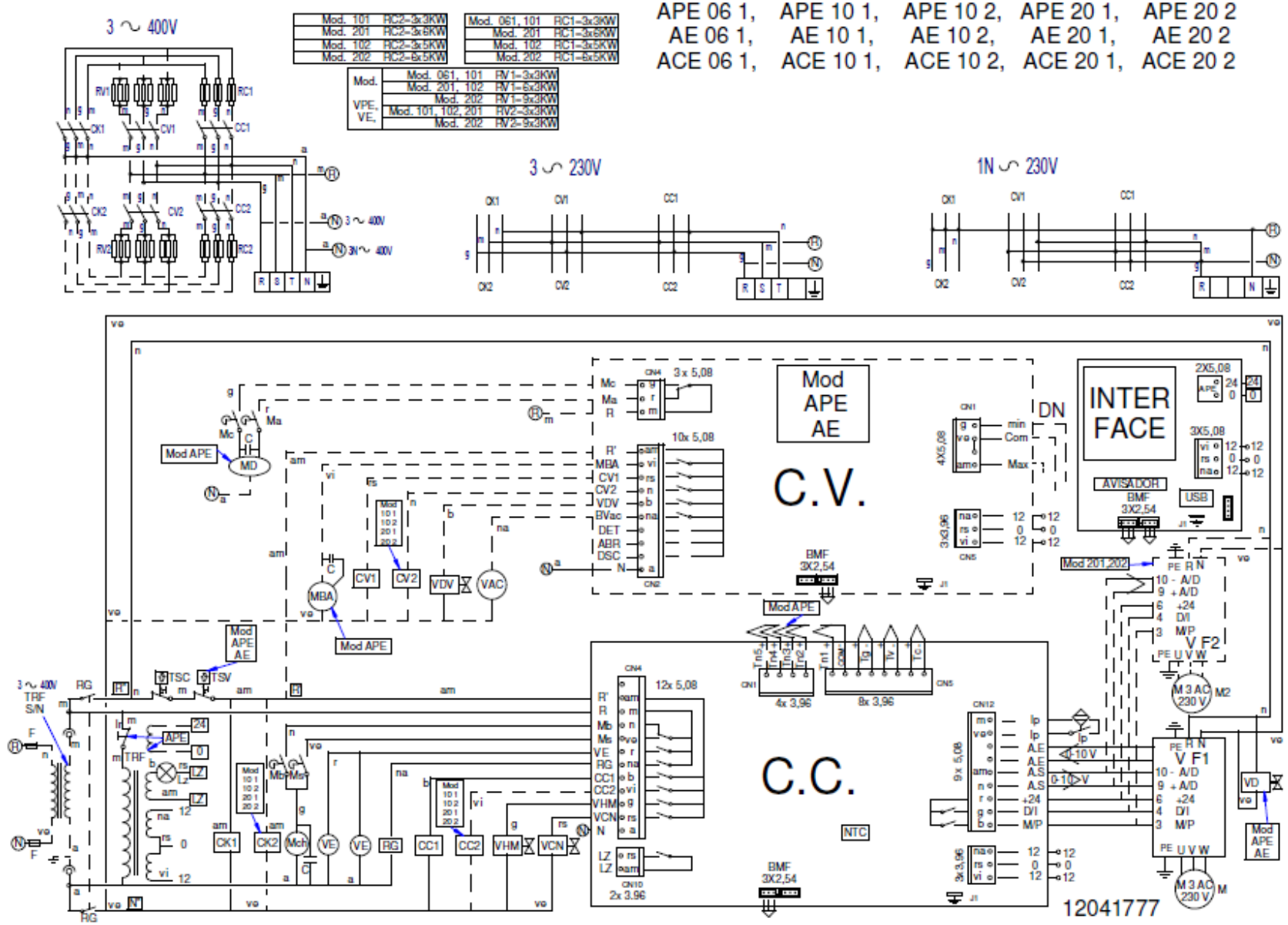


APG 06 1, APG 10 1, APG 20 1,
APG 10 2, APG 20 2

AG 06 1, AG 10 1, AG 20 1,
AG 10 2, AG 20 2

ACG 06 1, ACG 10 1, ACG 20 1,
ACG 10 2, ACG 20 2

APE 06 1, APE 10 1, APE 10 2, APE 20 1, APE 20 2
AE 06 1, AE 10 1, AE 10 2, AE 20 1, AE 20 2
ACE 06 1, ACE 10 1, ACE 10 2, ACE 20 1, ACE 20 2



FAGOR

FAGOR INDUSTRIAL

OVEN MAINTENANCE AND CHECK POINTS

Electric oven

	Door					Chamber light	Chimney			Turbine			Cleaning drainage			Cooling fans	Water solenoid valves	Shower	Leaks		Level control			Electricity					Spike probe	Insulation	Boiler descaling	Cover	Levers	Control holder
	Counterseal	Hinge	Lever	Tub	Sensor		Chimney	Motor	Micros	Motor	Turbine	Frequency Variator	Drainage pump	Cleaning pump	Cleaning valve				Water	Steam	Level detection	Pipes	Level detecting rods	Contacts	Contactors	Chamber resistor	Boiler resistor	Terminals						
ACE	X	X	X	X	X	X	X	X	X	X	X	X				X	X		X	X				X	X	X		X		X		X	X	X
AE	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
APE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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Gas oven

	Door					Chamber light	Chimney			Turbine			Cleaning drainage			Cooling fans	Water solenoid valves	Shower	Leaks			Level control			Electricity		
	Counterseal	Hinge	Lever	Tub	Sensor		Chimney	Motor	Micros	Motor	Turbine	Frequency Variator	Drainage pump	Cleaning pump	Cleaning valve				Water	Steam	Gas	Level detection	Pipes	Level detecting rods	Contacts	Contactors	Terminales
ACG	X	X	X	X	X	X	X	X	X	X	X	X				X	X		X	X	X				X	X	X
AG	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
APG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

	Chamber burner							Boiler burner						Spike probe	Insulation	CO measurement	Boiler descaling	Cover	Levers	Control holder
	Lighter	Flame detector	Ignition control	Gas valve	Blower	Burner	Air intake	Encendedor	Detector llama	Ignition control	Gas valve	Burner	Air intake							
COG	X	X	X	X	X	X	X								X	X		X	X	X
AG	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
APE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

NOTES:

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